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SUPPLEMENT

TO THE

ANNUAL REPORT

OF THE

State Engineer and Surveyor

OF THE

STATE OF NEW YORK

For the Fiscal Year Ended September 30, 1913

TRANSMITTED TO THE LEGISLATURE JANUARY 26, 1914

ALBANY
J. B. LYON COMPANY, PRINTERS
1914

REPORT

OF

BUREAU OF HYDRAULICS

DEPARTMENT OF BARGE CANAL,

COMPRISING THE FOURTEENTH ANNUAL REPORT ON STREAM GAGING

JOHN P. NEWTON,
Assistant Engineer.

REPORT ON GAGING OF STREAMS FOR 1913.

HON. JOHN A. BENSEL, *State Engineer and Surveyor:*

SIR.—I have the honor to submit the report of the Bureau of Hydraulics, Barge Canal Department, for the calendar year 1913.

This report contains stream gaging data obtained during the year 1913, as follows: The observations of water-surface elevations and records of the discharge of streams along the lines of the Barge canal; gaging records of streams throughout the state, furnished by the United States Geological Survey in coöperation with this Department and other stream gagings furnished by corporations and individuals.

SCOPE OF WORK DONE.

The Bureau of Hydraulics, as a specific branch of the Barge Canal Department, was organized in 1907. The work carried on by this Bureau is chiefly along the following lines:

(1) Maintenance of gaging stations in connection with the Barge canal work.

(2) Investigations and reports on special hydraulic problems arising in connection with the Barge canal work.

(3) Preparation of defense for the State in hydraulic cases, including claims for backwater, damages to water power by diversion and appropriation and other similar cases before the State Board of Claims.

METHODS EMPLOYED.

The methods employed in obtaining the data contained in this report have been described in detail in numerous preceding reports and it is not deemed necessary to elaborate further on the fundamental principles involved in this class of work.

Generally speaking, the methods employed are substantially the same as have been in use in connection with this work for several years past and are such as best commend themselves

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to those engaged in this class of work. Recently numerous staff and chain gages have been replaced or augumented by automatic recording gages by the United States Geological Survey, which coöperates with this Department.

ACKNOWLEDGMENT.

Acknowledgment should be made to Mr. J. Waldo Smith, Chief Engineer, Board of Water Supply of the city of New York, who has furnished the records of Catskill streams, with permission to publish these records in this report. Acknowledgment is also due to several corporations and individuals for data furnished.

The computations of records furnished by the United States Geological Survey in coöperation with this Department, have been made by Mr. C. C. Covert, District Engineer of the Water Resources Branch of the United States Geological Survey.

Numerous records have also been furnished by Mr. Covert for stations which have been maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

ST. LAWRENCE RIVER DRAINAGE.

GENERAL FEATURES.

St. Lawrence river receives a flow of a number of New York streams having their sources in a northerly slope of the Adirondacks and fed by the numerous lakes with which the region is dotted. Some of these rivers, as the Grass, Raquette and St. Regis, lie entirely within the United States; others, notably Salmon, Trout, Chateaugay and English rivers, cross the international boundary and flow northward into the St. Lawrence in Canada, as does also Richelieu river, the outlet of Lake Champlain. The following table gives a list of the principal tributaries of the St. Lawrence in the United States, with the areas drained by them determined chiefly from Bien's Atlas of the State of New York.

Drainage Areas of St. Lawrence River Tributaries in the United States.

	Square miles.		Square miles.
Oswegatchie river	1,609	Salmon river *a*	273
Grass river	637	Trout river *b*	129
Raquette river	1,219	Chateaugay river *b*	199
St. Regis river	910	English river *b*	53
Little Salmon river *a*	103	Lake Champlain *c*	7,867

a Above junction near international boundary. *b* At New York state line. *c* Above outlet.

The St. Lawrence drains, through Lake Champlain, an area of 4,560 square miles in the State of Vermont. This drainage is practically all from Missisquoi, Lamoille and Winooski rivers and Otter creek.

DEER RIVER.

DEER RIVER AT BRASHER IRON WORKS, N. Y.

This gaging station is located about 1,000 feet above the steel highway bridge in the village of Brasher Iron Works and two miles above the confluence of the Deer river with the St. Regis river. There are no important tributaries between the gage and the mouth of the river. The drainage area at this station is 206 square miles.

The gage is of the sloping staff type, reading from 5/10 of a foot to 11 feet. This gage is located about 1,000 feet below the bridge. An auxiliary staff gage, fastened to the upstream side of one of the bridge abutments, is used as a reference while making meter measurements. The channel at the bridge is composed of solid, smooth rock, although about 300 feet farther downstream it is composed of gravel of a permanent nature.

During the summer and high stages, current-meter discharge records are made from the bridge and at low stages by wading a short distance above the bridge. Indications seem to point to the fact that ice conditions materially affect the flow.

This station is maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Mean Daily Gage Height, in Feet, of Deer River at Brasher Iron Works, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	3.40	......	......	4.20	1.86	1.20	1.18	1.15	1.06	0.95	1.75	1.88
2	2.90	......	......	3.80	1.78	1.96	1.01	1.14	0.89	1.14	1.65	1.92
3	3.50	......	......	3.40	1.76	1.85	0.98	1.08	1.06	1.86	1.64	2.00
4	4.70	......	......	5.20	1.67	1.72	0.91	1.15	1.06	2.00	1.61	2.30
5	......	......	......	6.60	1.66	1.68	1.05	1.14	1.08	1.75	1.64	2.30
6	......	......	......	4.20	1.70	1.65	1.00	1.25	1.05	1.58	1.60	2.15
7	......	3.60	2.50	3.60	1.52	1.66	1.05	1.16	1.04	1.52	1.58	1.99
8	......	......	......	3.20	1.48	1.72	1.06	1.10	1.04	1.40	1.50	2.00
9	......	......	......	2.90	1.51	1.74	1.24	1.10	0.92	1.35	1.70	2.00
10	3.60	......	......	2.70	1.50	1.73	1.12	1.09	0.99	1.25	2.40	2.00
11	......	......	......	2.85	1.48	1.64	1.09	1.06	1.02	1.25	2.20	1.95
12	......	......	......	3.20	1.49	1.54	1.16	0.95	0.90	1.25	2.00	2.10
13	......	......	......	3.10	1.48	1.52	1.12	1.11	0.85	1.34	1.91	1.95
14	......	3.50	8.00	2.75	1.46	1.42	1.18	1.08	0.85	1.41	1.85	2.25
15	......	......	6.20	2.55	1.50	1.32	1.20	1.08	0.98	1.30	1.79	2.60
16	......	......	4.50	2.40	1.52	1.36	1.19	1.08	1.02	1.30	1.70	2.40
17	6.80	......	3.30	2.30	1.56	1.41	1.12	1.04	1.01	1.35	1.60	1.98
18	6.00	......	2.90	2.25	1.64	1.32	1.08	0.94	1.09	1.29	1.59	2.10
19	......	......	3.20	2.40	1.70	1.35	1.10	0.80	1.14	1.30	1.58	2.05
20	......	......	3.20	2.50	1.72	1.29	1.04	0.85	1.12	1.48	2.60	2.10
21	......	4.00	3.40	2.35	1.68	1.40	1.10	0.96	1.12	2.65	2.50	1.80
22	......	......	3.60	2.15	1.78	1.31	1.12	0.96	1.25	2.40	2.30	1.78
23	......	......	3.20	2.30	1.82	1.15	1.08	0.95	1.30	2.10	2.65	1.90
24	4.00	......	3.20	2.35	1.74	1.20	1.06	1.10	1.28	1.92	2.35	2.10
25	......	......	4.60	2.20	1.75	1.28	1.14	1.12	1.25	2.15	2.20	1.95
26	......	......	4.60	2.15	1.68	1.27	1.21	1.02	1.15	2.05	2.00	1.75
27	......	......	5.40	2.20	1.68	1.20	1.19	1.15	1.11	2.30	1.90	1.95
28	......	2.80	5.10	2.10	1.90	1.24	1.18	1.16	1.10	2.10	1.85	2.00
29	......	......	4.20	2.00	2.40	1.26	1.25	1.15	1.04	2.00	1.72	2.20
30	......	......	5.20	1.92	2.25	1.24	1.22	1.16	0.98	1.92	1.79	2.30
31	2.45	......	5.10	......	2.10	......	1.16	1.08	......	1.90	......	2.05

NOTE.— Gage heights affected by ice, January 5 to March 16, and December 29 to 31, inclusive.

Current-meter Discharge Measurements of Deer River at Brasher Iron Works, N. Y.

DATE.	Hydrographer.	Gage Reading.			Lateral interval.	Sub-mergence depth.	Total area.	Total width.	Corrected discharge.
		Beginning.	Ending.	Mean.					
1913.					*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Feb. 26 *a*	C. S. De Golyer	2.78	2.79	2.78	5	0.2 & 0.8	116	74	134
Mar. 18	R. S. Barnes	2.92	2.88	2.90	5	0.2 & 0.8	220	97	537
Apr. 4	R. S. Barnes	5.50	5.70	5.60	5	0.2 & 0.8	398	94	2,530
Apr. 4	R. S. Barnes	5.72	5.58	5.65	5	0.2 & 0.8	409	94	2,640
Apr. 18	R. S. Barnes	2.40	2.40	2.40	5	0.6	171	93	297
Apr. 20 *b*	C. S. De Golyer	0.85	0.87	0.86	2.5	0.2 & 0.8	49.5	45	21.8
Apr. 20 *c*	C. S. De Golyer	0.87	0.89	0.88	2.5	0.2 & 0.8	39.2	45.5	24

a Measurement made 1,500 feet above gage, under complete ice cover.
b Measurement made by wading 300 feet above gage.
c Measurement made by wading 1,500 feet above gage.

Mean Daily Discharge, Second-feet, of Deer River at Brasher Iron Works, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	704	......	......	1,190	166	58	56	52	42	30	143	171
2	484	......	......	920	149	189	36	51	24	51	124	180
3	754	......	......	704	145	164	33	44	42	166	122	199
4	1,590	......	......	2,090	128	137	26	52	42	199	117	279
5	......	......	......	3,920	126	129	40	51	44	143	122	279
6	......	......	......	1,190	133	124	35	64	40	112	115	238
7	......	......	......	808	102	126	40	53	39	102	112	197
8	......	......	......	610	96	137	42	46	39	85	99	199
9	......	......	......	484	101	141	63	46	27	78	133	199
10	808	......	......	410	99	139	48	45	34	64	309	199
11	......	......	......	465	96	122	45	42	37	64	251	187
12	......	......	......	610	98	105	53	30	25	64	199	225
13	......	......	......	560	96	102	48	47	21	77	177	187
14	......	......	......	428	93	88	56	44	21	86	164	265
15	......	......	......	358	99	74	58	44	33	71	151	375
16	......	......	......	309	102	79	57	44	37	71	133	309
17	4,220	......	656	279	109	86	48	39	36	78	115	194
18	3,070	......	484	265	122	74	44	29	45	70	113	225
19	......	......	610	309	133	78	46	17	51	71	112	212
20	......	......	610	341	137	70	39	21	48	96	375	225
21	......	......	704	294	129	85	46	31	48	392	341	153
22	......	......	808	238	149	72	48	31	64	309	279	149
23	......	......	610	279	157	52	44	30	71	225	392	175
24	1,050	......	610	294	141	58	42	46	68	180	294	225
25	......	......	1,500	251	143	68	51	48	64	239	251	187
26	......	......	1,500	238	129	67	59	37	52	212	199	143
27	......	......	2,310	251	129	58	57	52	47	279	175	187
28	......	......	1,980	225	175	63	56	53	46	225	164	199
29	......	......	1,190	199	309	66	64	52	39	199	137	190
30	......	......	2,090	180	265	63	61	53	33	180	151	190
31	325	......	1,980	......	225	......	53	44	......	175	......	180
Mean	1,000	693	955	624	138	95.8	48.2	43.2	42	142	186	210

Monthly Discharge of Deer River at Brasher Iron Works, N. Y.
[Drainage area, 206 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	....	....	1,000	4.85	5.59
February	....	....	693	3.36	3.50
March	....	....	955	4.64	5.35
April	3,920	180	624	3.03	3.38
May	309	93	138	0.67	0.77
June	189	52	95.8	0.465	0.52
July	64	26	48.2	0.234	0.27
August	64	17	43.2	0.21	0.24
September	68	21	42	0.204	0.23
October	392	30	142	0.689	0.79
November	392	99	186	0.903	1.01
December	375	143	210	1.02	1.18

NOTE.— Discharge, January 1 to March 16, estimated from one discharge measurement and comparison with near-by streams. Discharge, December 29 to 31, estimated.

ST. REGIS RIVER.

ST. REGIS RIVER AT BRASHER CENTER, N. Y.

This gaging station is located at the steel highway bridge in the village of Brasher Center, five miles downstream from Brasher Falls, 6½ miles below the junction of the east and west branches of the St. Regis river and about 12 miles above the mouth. The drainage area at this point is 621 square miles.

The gage is of the chain-and-weight type, fastened to the downstream side of the bridge, and is read twice daily.

The channel at this station is very rough and composed of gravel and large boulders and apparently is of a permanent nature. At low stages of the stream, current-meter discharge measurements are made at a point 500 feet below the bridge. At high stages measurements are made from the bridge. During the winter the relation between gage height and discharge is affected by ice.

Mean Daily Gage Height, in Feet, of St. Regis River at Brasher Center, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec
1913.												
1.....	5.70	5.65	6.80	6.50	5.00	4.95	4.26	4.12	3.82	4.05	4.90	4.65
2.....	5.45	5.75	6.60	6.30	4.85	4.80	4.20	4.08	3.84	4.12	4.75	4.45
3.....	5.35	5.90	6.70	5.80	4.55	4.70	4.18	3.98	3.90	4.50	4.65	4.75
4.....	5.90	5.95	7.00	6.80	4.40	4.70	4.14	4.10	3.90	4.80	4.55	4.90
5.....	5.60	6.00	7.20	7.10	4.42	4.70	4.10	4.08	3.82	4.85	4.42	4.85
6.....	5.65	6.30	6.90	6.80	4.45	4.65	4.12	4.20	3.84	4.70	4.42	4.70
7.....	6.10	6.60	6.80	6.40	4.50	4.65	4.14	4.22	3.81	4.50	4.50	4.80
8.....	6.60	6.50	6.90	5.90	4.50	4.90	4.18	4.20	3.81	4.38	4.55	4.90
9.....	7.00	6.60	6.90	5.75	4.50	4.90	4.15	4.12	3.84	4.31	4.60	4.85
10.....	7.50	6.80	7.10	5.55	4.50	4.80	4.18	4.05	3.85	4.22	4.80	4.70
11.....	8.00	7.00	7.20	5.65	4.50	4.75	4.10	4.08	3.84	4.18	5.10	4.70
12.....	7.30	7.30	7.60	5.65	4.45	4.80	4.15	4.08	3.82	4.20	5.05	4.60
13.....	7.80	7.20	8.40	5.55	4.55	4.70	4.18	4.02	3.90	4.28	4.90	4.55
14.....	8.30	7.20	10.00	5.40	4.42	4.60	4.12	4.02	3.90	4.28	4.85	4.70
15.....	8.00	7.30	11.10	5.25	4.40	4.42	4.12	4.01	3.89	4.32	4.80	4.95
16.....	7.60	7.30	10.80	5.30	4.45	4.40	4.15	4.02	3.86	4.38	4.70	5.15
17.....	8.10	7.30	9.60	5.20	4.55	4.29	4.15	4.01	3.82	4.30	4.70	4.75
18.....	9.30	7.40	9.10	5.20	4.55	4.19	4.10	3.95	3.92	4.25	4.60	4.80
19.....	8.60	7.40	9.00	5.20	4.60	4.32	4.12	3.95	3.92	4.30	4.50	5.25
20.....	8.40	7.40	8.60	5.15	4.50	4.32	4.08	3.92	3.96	4.38	5.10	4.90
21.....	8.60	7.80	8.40	5.20	4.60	4.30	4.08	3.90	4.00	5.15	5.40	4.70
22.....	8.00	7.20	7.20	5.15	4.60	4.31	4.10	3.84	4.15	5.30	5.30	4.60
23.....	7.50	7.20	6.20	5.20	4.70	4.24	4.02	3.86	4.30	5.30	5.20	4.70
24.....	7.30	7.40	6.10	5.20	4.80	4.22	4.02	3.85	4.32	5.20	5.10	4.70
25.....	6.60	7.20	6.30	5.10	4.80	4.22	4.08	3.81	4.32	5.10	5.10	4.60
26.....	6.30	7.20	6.60	5.05	4.70	4.24	4.08	3.89	4.22	5.10	5.20	4.50
27.....	5.95	7.10	7.30	4.95	4.70	4.26	4.02	3.95	4.12	5.30	4.95	5.15
28.....	5.90	6.80	7.20	4.90	4.80	4.26	4.08	4.04	4.06	5.25	4.90	6.00
29.....	6.00	......	7.10	4.90	5.15	4.30	4.10	4.04	4.05	5.20	4.85	5.70
30.....	6.00	......	7.10	5.00	5.35	4.30	4.18	4.01	4.02	5.10	4.75	5.30
31.....	5.95	......	7.00	......	5.25	......	4.15	3.99	......	4.90	......	5.35

NOTE.— Gage heights affected by ice during a large part of January, February and March, until March 22, and from December 27 to 31, inclusive.

Current-meter Discharge Measurements of St. Regis River at Brasher Center, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Corrected discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Feb. 25 *a*....	C. S. De Golyer.....	7.24	10	0.2 & 0.8	889	207	906
Mar. 17.....	R. S. Barnes........	9.60	10	0.2 & 0.8	1,370	220	3,900
April 4.....	R. S. Barnes........	6.89	10	0.2 & 0.8	800	220	6,440
April 18.....	R. S. Barnes........	5.20	5	0.2 & 0.8	507	213	1,550
Aug. 21 *b*....	C. S. De Golyer.....	3.86	10	0.2 & 0.8	302	218	170
Aug. 21 *b*....	C. S. De Golyer.....	3.86	5	0.2 & 0.8	189	225	171

a Measurement under complete ice cover, 500 feet above gage.
b Measurement made by wading about 500 feet above gage.

Mean Daily Discharge, Second-feet, of St. Regis River at Brasher Center, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	......	......	......	4,700	1,270	1,200	423	322	153	277	1,130	801
2.....	......	......	......	4,040	1,060	990	376	296	162	322	925	590
3.....	......	......	......	2,740	690	860	362	235	191	638	801	925
4.....	......	......	......	5,830	542	860	335	308	191	990	690	1,130
5.....	......	......	......	7,030	561	860	308	296	153	1,060	561	1,060
6.....	......	......	......	5,830	590	801	322	376	162	860	561	860
7.....	......	......	......	4,360	638	801	335	392	148	638	638	990
8.....	......	......	......	2,960	638	1,130	362	376	148	524	690	1,130
9.....	......	......	......	2,640	638	1,130	342	322	162	463	742	1,060
10.....	......	......	......	2,230	638	990	362	277	167	392	990	860
11.....	......	......	......	2,430	638	925	308	296	162	362	1,430	860
12.....	......	......	......	2,430	590	990	342	296	153	376	1,350	742
13.....	......	......	......	2,230	690	860	362	258	191	438	1,130	690
14.....	......	......	......	1,940	561	742	322	258	191	438	1,060	860
15.....	......	......	......	1,680	542	561	322	252	186	472	990	1,200
16.....	......	......	......	1,760	590	542	342	258	172	524	860	1,510
17.....	......	......	3,900	1,590	690	446	342	252	153	454	860	925
18.....	......	......	......	1,590	690	369	308	218	202	415	742	990
19.....	......	......	......	1,590	742	472	322	218	202	454	638	1,680
20.....	......	......	......	1,510	638	472	296	202	224	524	1,430	1,130
21.....	......	......	......	1,590	742	454	296	191	246	1,510	1,940	860
22.....	......	......	......	1,510	742	463	308	162	342	1,760	1,760	742
23.....	......	......	3,740	1,590	860	407	258	172	454	1,760	1,590	860
24.....	......	......	3,460	1,590	990	392	258	167	472	1,590	1,430	860
25.....	......	906	4,040	1,430	990	392	296	148	472	1,430	1,430	742
26.....	......	......	5,060	1,350	860	407	296	186	392	1,430	1,590	638
27.....	......	......	7,880	1,200	860	423	258	218	322	1,760	1,200	......
28.....	......	......	7,450	1,130	990	423	296	271	283	1,680	1,130	......
29.....	......	......	7,030	1,130	1,510	454	308	271	277	1,590	1,060	......
30.....	......	......	7,030	1,270	1,850	454	362	252	258	1,430	925	......
31.....	......	......	6,620	......	1,680	......	342	240	......	1,130	......	......
Mean...	......	......	3,430	2,500	829	676	325	258	233	893	1,080	919

NOTE.— Daily discharge given for February 25 and March 17 are results of discharge measurements.

Monthly Discharge of St. Regis River at Brasher Center, N. Y.
[Drainage area, 621 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	....	....	3,530	5.72	6.60
February	....	....	2,460	3.96	4.12
March	....	....	3,430	5.52	6.36
April	7,030	1,130	2,500	4.03	4.50
May	1,850	542	829	1.34	1.54
June	1,200	369	676	1.09	1.22
July	423	258	325	0.523	0.60
August	392	148	258	0.415	0.48
September	472	148	233	0.375	0.42
October	1,760	277	893	1.44	1.66
November	1,940.	561	1,080	1.74	1.94
December	1,680	590	919	1.48	1.71

NOTE.— Discharge, January 1 to March 22, estimated from two discharge measurements and and comparison with near-by streams. Discharge, December 27 to 31, estimated.

RAQUETTE RIVER.

DESCRIPTION.

Raquette river drains a long, narrow basin extending from northern Hamilton county to St. Lawrence river. Its sources are on an elevated plateau, dotted with mountains interspersed with lakes. The region is timbered, but numerous marsh and swamp areas exist, many of which are on the divide and feed streams flowing in opposite directions. The lakes of the head waters afford ample opportunities for storage development.

RAQUETTE RIVER AT MASSENA SPRINGS, N. Y.

This gaging station is located at the highway bridge at Massena Springs, 1,000 feet above the New York Central railroad bridge used for freight transfer from the railroad station to the Massena power station, 8 miles below Raymondville and 10 miles above the mouth of the stream. The drainage area at this point is 1,170 square miles.

The gage was formerly of the vertical staff type. This was replaced by a chain-and-weight gage, fastened to an old highway bridge located just above the present bridge. On February 2, 1912, this gage was relocated on the present concrete bridge.

The channel of the river at this station is composed of coarse gravel and small boulders and is of a fairly permanent character.

Current-meter discharge measurements were formerly made from the old bridge, but are now made from the new one. The operation of a number of power plants upstream from the station has a marked effect on the low-water discharge of the stream. The evidence is that ice conditions have but a slight effect on the flow.

The maximum discharge of the Raquette river at this station during the flood of March, 1913, was approximately 16,500 second-feet, or 14.1 second-feet per square mile of drainage area.

This station is maintained by the United States Geological Survey in coöperation with the Department of the State Engineer and Surveyor.

Mean Daily Gage Height, in Feet, of Raquette River at Massena Springs, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	6.2	8.0	5.5	11.1	5.0	......	......	......	1.35	1.60	3.8	4.8
2	6.2	8.0	5.4	11.3	4.9	......	......	......	1.25	1.60	3.2	4.8
3	6.8	7.8	5.4	11.6	4.6	......	......	......	1.40	1.65	3.4	4.8
4	7.0	7.8	5.4	12.6	4.6	......	......	......	1.20	1.60	3.6	4.2
5	7.0	7.6	5.6	13.5	4.4	......	......	......	1.15	1.40	3.6	4.4
6	6.8	7.4	5.4	12.8	4.2	......	......	......	1.10	1.45	3.4	4.4
7	6.8	7.4	5.4	11.7	4.2	......	......	......	0.95	1.55	3.6	4.6
8	6.7	7.2	5.2	10.6	4.0	......	......	......	1.00	1.30	3.6	4.0
9	6.6	7.0	5.4	9.6	4.0	......	......	......	1.05	1.30	3.2	3.5
10	6.8	6.8	5.4	9.2	3.8	......	......	......	1.15	1.05	3.5	4.3
11	6.8	6.8	5.5	9.1	3.6	......	......	......	1.25	1.05	4.0	4.4
12	7.0	6.5	5.6	8.8	3.6	......	......	......	1.45	1.05	3.7	4.4
13	7.3	6.2	5.6	8.2	3.6	......	1.85	......	1.55	0.80	3.8	4.5
14	7.7	6.2	5.8	7.8	3.4	......	1.85	......	1.40	1.75	3.6	4.6
15	7.4	6.0	6.2	7.1	3.4	......	1.85	......	1.35	1.55	3.4	4.4
16	7.6	6.0	7.2	7.0	3.3	......	1.95	......	......	0.80	4.2	4.4
17	7.9	5.8	8.6	6.8	3.3	......	2.05	......	1.35	1.00	4.2	5.4
18	8.0	6.0	9.0	6.6	3.2	......	2.15	......	1.30	0.95	4.2	4.5
19	8.3	6.0	9.0	6.7	3.1	......	2.00	......	1.45	1.95	4.2	5.9
20	9.8	5.9	9.2	6.6	3.0	......	2.10	......	1.15	......	4.2	5.7
21	10.2	5.8	9.6	6.4	2.8	......	2.20	......	0.85	1.40	4.6	5.6
22	10.3	5.8	9.8	6.2	2.8	......	2.10	1.75	1.10	1.95	4.6	6.3
23	10.2	5.7	9.9	6.2	2.6	......	2.20	1.55	1.40	3.40	4.4	5.6
24	10.1	5.6	10.0	6.1	2.6	......	2.05	1.05	1.50	2.80	4.8	6.7
25	9.8	5.3	10.0	6.0	2.8	......	2.00	1.05	1.50	3.30	4.8	5.8
26	9.6	5.4	9.9	5.7	3.0	......	2.05	1.55	1.45	4.20	4.8	6.0
27	9.0	5.4	10.0	5.6	3.0	......	1.80	1.70	1.50	3.90	5.0	6.4
28	8.8	5.4	10.0	5.4	3.0	......	1.70	1.55	1.20	3.70	4.6	5.4
29	8.7	......	10.1	5.4	3.0	......	......	1.60	1.10	3.80	4.7	5.8
30	8.4	......	10.8	5.2	3.0	......	......	1.80	1.30	3.80	5.0	5.7
31	8.2	......	12.8	......	3.0	......	......	1.55	......	4.60	......	......

NOTE.— Gage heights probably not much affected by ice. Gage heights from June 1 to July 12 and July 28 to August 21, inclusive, do not compare well with records from the automatic gage at Piercefield. Upon investigation it was found that the gage reader had not been taking his observations faithfully. A new gage reader was employed September 17, 1913. Records prior to June 1, 1913, compare well with Piercefield records and are probably reliable with the accuracy given in the monthly tables.

Current-meter Discharge Measurements of Raquette River at Massena Springs, N. Y

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
April 5	R. S. Barnes......	13.30	897	10	0.2 & 0.8	2,240	173	6.66	14,900
April 5	R. S. Barnes......	13.26	897	10	0.2 & 0.8	2,240	173	6.66	14,900
April 17	R. S. Barnes......	7.38	897	5	0.2 & 0.8	1,190	173	4.82	5,740
Aug. 22 *a*	C. S. De Golyer.....	1.62	877	5	0.2 & 0.8	217	134	1.35	294
Aug 29 *a*	C. S. De Golyer....	1.62	877	5	0.2 & 0.8	209	131	1.46	306
Dec. 8	C. S. De Golyer.....	3.80	912	5	0.2 & 0.8	575	184	3.32	1,910
Dec. 9	C. S. De Golyer.....	4.34	912	5	0.2 & 0.8	675	184	3.36	2,270

a Made by wading below gage.

Mean Daily Discharge, in Second-feet, of Raquette River at Massena Springs, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	4,290	6,590	3,520	11,400	3,010	......	......	......	180	292	1,860	2,810
2.....	4,290	6,590	3,410	11,700	2,910	......	......	......	143	292	1,360	2,810
3.....	5,020	6,310	3,410	12,200	2,610	......	......	......	200	318	1,520	2,810
4.....	5,270	6,310	3,410	13,800	2,610	......	......	......	126	292	1,680	2,220
5.....	5,270	6,040	3,630	15,300	2,410	......	......	......	112	200	1,680	2,410
6.....	5,020	5,780	3,410	14,100	2,220	......	......	......	97	222	1,520	2,410
7.....	5,020	5,780	3,410	12,300	2,220	......	......	......	61	268	1,680	2,610
8.....	4,900	5,520	3,210	10,600	2,040	......	......	......	72	160	1,680	2,040
9.....	4,770	5,270	3,410	8,960	2,040	......	......	......	84	160	1,360	1,600
10.....	5,020	5,020	3,410	8,350	1,860	......	......	......	112	84	1,600	2,310
11.....	5,020	5,020	3,520	8,200	1,680	......	......	......	143	84	2,040	2,410
12.....	5,270	4,650	3,630	7,750	1,680	......	......	......	222	84	1,770	2,410
13.....	5,640	4,290	3,630	6,870	1,680	......	430	......	268	30	1,860	2,510
14.....	6,180	4,290	3,850	6,310	1,520	......	430	......	200	372	1,680	2,610
15.....	5,780	4,070	4,290	5,400	1,520	......	430	......	180	268	1,520	2,410
16.....	6,040	4,070	5,520	5,270	1,440	......	490	......	180	30	2,220	2,410
17.....	6,450	3,850	7,450	5,020	1,440	......	552	......	180	72	2,220	......
18.....	6,590	4,070	8,050	4,770	1,360	......	614	......	160	61	2,220	......
19.....	7,020	4,070	8,050	4,900	1,280	......	521	......	222	490	2,220	......
20.....	9,270	3,960	8,350	4,770	1,200	......	583	......	112	372	2,220	......
21.....	9,910	3,850	8,960	4,530	1,050	......	646	......	40	200	2,610	......
22.....	10,100	3,850	9,270	4,290	1,050	......	583	372	97	490	2,610	......
23.....	9,910	3,740	9,430	4,290	910	......	646	268	200	1,520	2,410	......
24.....	9,750	3,630	9,590	4,180	910	......	552	84	244	1,050	2,810	......
25.....	9,270	3,310	9,590	4,070	1,050	......	521	84	244	1,440	2,810	......
26.....	8,960	3,410	9,430	3,740	1,200	......	552	268	222	2,220	2,810	......
27.....	8,050	3,410	9,590	3,630	1,200	......	400	344	244	1,950	3,010	......
28.....	7,750	3,410	9,590	3,410	1,200	......	344	268	126	1,770	2,610	......
29.....	7,600	......	9,750	3,410	1,200	......	......	292	97	1,860	2,710	......
30.....	7,160	......	10,900	3,210	1,200	......	......	400	160	1,860	3,010	......
31.....	6,870	......	14,100	......	1,200	......	......	268	......	2,610	......	......

NOTE.— Discharge curve slightly changed by flood of March, 1913. New rating table used beginning April 1, 1913. Daily discharge during February may be slightly larger on account of ice.

Monthly Discharge of Raquette River at Massena Springs, N. Y.
[Drainage area, 1,170 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	10,100	4,290	6,690	5.72	6.60
February	6,590	3,310	4,650	3.97	4.13
March	14,100	3,210	6,480	5.54	6.39
April	15,300	3,210	7,220	6.17	6.88
May	3,010	910	1,640	1.40	1.61
June	....	....	1,580	1.35	1.51
July	....	....	702	0.60	0.69
August	....	....	339	0.29	0.33
September	268	40	158	0.135	0.15
October	2,610	30	681	0.582	0.67
November	3,010	1,360	2,110	1.80	2.01
December	2,810	....	2,050	1.75	2.02

NOTE.— Discharge for periods where daily figures are not published, estimated from flow at Piercefield, N. Y.

RAQUETTE RIVER AT PIERCEFIELD, N. Y.

This gaging station is located about three-quarters of a mile above the head of Black rapids and half a mile below the dam of the International Paper Company at Piercefield. The drainage area at this point is 723 square miles.

In 1912 a Stevens automatic gage was installed, to supersede a chain-and-weight gage formerly used. Current-meter discharge measurements are made from a cable located just above Black rapids. The discharge is very slightly affected by ice. The dam of the International Paper Company controls the flow of the stream at this station during low water.

This station is maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission and the gage is attended to by an employee of the International Paper Company.

Mean Daily Gage Height, in Feet, of Raquette River at Pierrefield, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec
1913.												
1......	5.90	7.70	5.35	11.60	7.40	6.00	4.95	3.60	1.00	......	......	......
2......	5.85	7.40	4.10	11.60	7.30	5.95	4.95	2.93	0.88	......	......	......
3......	5.90	7.45	5.35	11.50	7.15	5.80	5.00	2.64	0.90	......	......	......
4......	5.80	7.15	5.55	......	6.95	5.90	5.00	3.55	0.94	......	......	......
5......	5.15	6.95	5.05	......	6.85	6.05	4.90	2.36	1.08	......	......	......
6......	5.70	6.60	5.00	......	6.75	5.85	4.90	4.10	1.28	......	......	......
7......	5.70	6.75	5.05	......	6.60	6.20	3.37	4.10	1.76	......	......	......
8......	6.10	6.50	5.05	11.00	6.60	6.15	4.75	3.70	2.79	......	......	......
9......	6.20	6.50	4.15	10.80	6.50	6.15	5.00	2.75	2.91	......	......	......
10......	6.20	6.40	4.20	10.50	6.25	6.25	4.75	3.85	2.37	......	......	6.20
11......	6.30	6.40	5.25	10.30	6.00	5.65	4.20	4.05	2.14	......	......	6.20
12......	6.20	6.00	5.00	10.10	6.05	6.20	4.15	2.82	1.83	......	......	6.30
13......	6.70	......	5.05	9.90	5.85	6.10	2.57	4.15	1.79	......	......	6.25
14......	6.70	......	5.00	9.30	4.80	5.85	3.70	3.18	1.83	......	......	5.90
15......	6.80	......	5.10	9.20	4.80	6.10	3.85	2.34	1.88	......	......	6.05
16......	6.80	......	......	9.20	5.20	6.00	3.65	2.21	2.06	......	......	6.10
17......	6.95	......	......	9.00	5.15	6.00	4.15	1.93	1.98	......	......	6.20
18......	7.20	......	......	8.90	3.80	5.80	4.20	3.95	1.98	......	......	6.20
19......	7.10	......	6.75	8.70	4.55	5.80	4.20	3.90	2.17	......	......	6.10
20......	7.60	......	6.90	8.30	5.15	5.35	4.20	3.12	2.23	......	......	5.75
21......	7.80	......	7.15	8.40	5.15	5.80	4.15	3.27	2.23	......	......	4.55
22......	8.00	......	7.45	8.20	5.20	5.60	3.75	2.59	2.17	......	......	5.45
23......	8.00	......	7.50	8.10	5.00	5.55	4.00	1.91	2.29	......	......	5.75
24......	8.10	......	8.00	8.00	5.30	5.55	4.00	3.69	2.33	......	......	5.60
25......	8.10	......	8.50	8.00	4.20	5.55	2.59	3.12	3.02	......	......	3.25
26......	8.00	......	9.00	7.80	4.20	5.60	2.93	2.78	3.45	......	......	5.40
27......	8.10	5.20	9.40	7.60	5.85	5.25	2.70	2.62	3.50	......	......	5.95
28......	8.00	5.05	9.90	7.60	5.75	4.20	3.04	2.21	3.46	......	......	4.40
29......	7.90	......	10.40	7.50	5.65	5.20	4.10	2.49	2.93	......	......	5.45
30......	7.80	......	10.80	7.50	5.55	5.40	4.10	2.40	3.07	......	......	5.55
31......	7.70	......	11.20	......	5.80	......	3.90	1.82	......	......	......	......

NOTE.—Gage heights not affected by ice. Computed from mean of 24 hourly **gage heights** ofr each day. Automatic gage out of commission during periods of no gage heights.

Current-Meter Discharge Measurements of Raquetta River at Piercefield, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Feb. 27 *a*..	C. S. De Golyer.......	5.50	5.0	0.2 & 0.8	590	110	1,110
April 8...	R. S. Barnes..........	11.07	5.0	0.2 & 0.8	1,220	165	6,380
April 12...	O. W. Hartwell.......	10.10	5.0	0.2 & 0.8	1,130	137	5,300
Oct. 1...	W. S. Easterly........	3.34	2.5	0.2 & 0.8	393	90	252
Dec. 11...	C. S. De Golyer.......	6.38	5.0	0.2 & 0.8	635	112	1,560
Dec. 10...	C. S. De Golyer.......	6.23	5.0	0.2 & 0.8	629	112	1,460
Dec. 30...	W. S. Easterly........	5.36	5.0	0.2 & 0.8	584	97.5	989

a Complete ice cover at gage; control open.

Mean Daily Discharge, Second-feet, of Raquette River at Piercefield, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1,350	2,840	1,020	6,970	2,420	1,320	770	313	15	......	......	......
2.....	1,320	2,560	515	6,970	2,320	1,290	770	176	11	......	......	......
3.....	1,350	2,600	1,020	6,910	2,180	1,200	790	132	12	......	......	......
4.....	1,280	2,340	1,130	6,810	2,010	1,260	790	300	13	......	......	......
5.....	918	2,160	872	6,700	1,930	1,350	750	101	18	......	......	......
6.....	1,220	1,860	850	6,590	1,850	1,230	750	455	27	......	......	......
7.....	1,220	1,980	872	6,460	1,740	1,450	258	455	53	......	......	......
8.....	1,490	1,780	872	6,310	1,740	1,420	690	339	151	......	......	......
9.....	1,560	1,780	530	6,080	1,660	1,420	790	146	169	......	......	......
10.....	1,560	1,700	545	5,740	1,480	1,480	690	381	102	......	......	1,450
11.....	1,630	1,700	965	5,500	1,320	1,110	485	440	81	......	......	1,450
12.....	1,560	1,420	850	5,280	1,350	1,450	470	155	57	......	......	1,520
13.....	1,940	......	872	5,040	1,230	1,380	124	470	54	......	......	1,480
14.....	1,940	......	850	4,380	710	1,230	339	218	57	......	......	1,260
15.....	2,020	......	893	4,270	710	1,380	381	99	61	......	......	1,350
16.....	2,020	......	1,090	4,270	880	1,320	326	86	74	......	......	1,380
17.....	2,160	......	1,400	4,050	858	1,320	470	64	68	......	......	1,450
18.....	2,380	......	1,650	3,940	367	1,200	485	410	68	......	......	1,450
19.....	2,290	......	1,980	3,730	610	1,200	485	395	83	......	......	1,380
20.....	2,740	......	2,110	3,310	858	955	485	206	89	......	......	1,170
21.....	2,940	......	2,340	3,420	858	1,200	470	237	89	......	......	610
22.....	3,140	......	2,600	3,210	880	1,080	353	126	83	......	......	1,000
23.....	3,140	......	2,650	3,110	790	1,060	425	63	94	......	......	1,170
24.....	3,240	......	3,140	3,010	930	1,060	425	200	98	......	......	1,080
25.....	3,240	......	3,640	3,010	485	1,060	126	206	188	......	......	232
26.....	3,140	......	4,140	2,810	485	1,080	172	149	276	......	......	980
27.....	3,240	940	4,540	2,610	1,230	905	139	129	288	......	......	1,290
28.....	3,140	872	5,080	2,610	1,170	485	191	87	279	......	......	555
29.....	3,640	......	5,630	2,510	1,110	880	455	115	172	......	......	1,000
30.....	2,940	......	6,070	2,510	1,060	980	455	105	197	......	......	1,060
31.....	2,840	......	6,510	......	1,200	......	395	56	......	......	......	......
Mean . .	2,190	1,540	2,170	4,600	1,240	1,190	474	220	101	420	1,320	1,220

NOTE.— Daily discharge, March 16 to 18, inclusive, and April 4 to 7, inclusive, estimated.

Monthly Discharge of Raquette River at Piercefield, N. Y.
[Drainage area, 723 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January...........................	3,240	918	2,190	3.03	3.49
February...........................	2,840	872	1,540	2.13	2.22
March...........................	6,510	515	2,170	3.00	3.46
April...........................	6,970	2,510	4,600	6.36	7.10
May...........................	2,420	485	1,240	1.72	1.98
June...........................	1,480	485	1,190	1.65	1.84
July...........................	790	124	474	0.656	0.76
August...........................	470	56	220	0.304	0.35
September...........................	288	11	101	0.14	0.16
October...........................	....	....	420	0.581	0.67
November...........................	....	....	1,300	1.80	2.01
December...........................	....	....	1,220	1.69	1.95

NOTE.— Discharge, February 13 to 26, and October 1 to December 9, inclusive, estimated from comparison with the flow at Massena Springs. These estimates indicate the flow of the river as regulated by the paper mill and numerous lakes immediately above the station.

OSWEGATCHIE RIVER.

DESCRIPTION.

Oswegatchie river has its source in the region of lakes and timbered swamps in the southern part of St. Lawrence county. The largest of the lakes is Cranberry lake, which affords valuable storage to water-power users on its outlet, East branch of Oswegatchie river. East and west branches flow in a general northwesterly direction and unite near Taleville. From Gouverneur to Oxbow the river flows southwestward; it then turns sharply and flows northeastward to Rensselaer Falls, turns again to the northwest, receives the outlet of Black lake at Galilee, and finally enters the St. Lawrence at Ogdensburg.

OSWEGATCHIE RIVER NEAR OGDENSBURG, N. Y.

The gaging station was established May 16, 1903, by Robert E. Horton. It is located at Eel weir bridge, just below the junction of Oswegatchie river and Black lake outlet. This gaging station is maintained by the U. S. Geological Survey in coöperation with this Department.

The channel is in rock and is partly artificial, rock underneath the bridge having been removed by blasting to increase the bridge opening. The bridge consists of two spans, the right being 129.6 feet long and the left 130.1 feet.

Discharge measurements are made from the downstream side of the bridge. The initial point for soundings is the top of the face of the right abutment, downstream side.

A standard chain gage, which is observed twice daily by Joseph H. La Rue, is attached to the ironwork of the bridge on the upstream side of the right-hand span. The bench-mark is a square chisel draft on the upstream side of the right-hand abutment; for which an arbitrary elevation of 100.0 is assumed. The datum of the gage is elevation 83.28, or 16.72 feet below the bench-mark.

Mean Daily Gage Height, in Feet, of Oswegatchie River near Ogdensburg, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	6.10	7.50	5.50	9.70	5.50	5.85	5.00	4.80	4.50	4.60	6.60	6.10
2.....	6.20	7.40	5.50	9.40	5.50	5.70	4.90	4.70	4.50	4.75	6.10	6.00
3	6.20	7.20	5.50	9.20	5.40	5.70	4.90	4.70	4.60	4.80	6.10	6.00
4.....	6.60	7.10	5.50	9.20	5.40	5.70	4.90	4.75	4.60	4.80	6.10	6.10
5	7.00	7.00	5.40	9.40	5.35	5.65	4.90	4.70	4.60	4.80	6.10	6.00
6.....	7.00	6.70	5.40	9.20	5.30	5.50	4.85	4.70	4.60	4.80	6.00	5.90
7.....	7.00	6.50	5.40	9.20	5.10	5.50	4.80	4.70	4.60	4.80	5.90	5.95
8	7.10	6.20	5.30	9.20	5.00	5.45	4.80	4.70	4.60	4.80	5.90	6.00
9.....	7.00	6.20	5.30	9.00	5.00	5.50	4.70	4.70	4.50	4.90	5.60	5.90
10.....	7.00	6.10	5.30	8.80	5.00	5.50	4.70	4.60	4.55	4.90	6.00	5.90
11.....	7.00	6.00	5.30	8.50	5.00	5.50	4.70	4.60	4.60	4.90	6.20	5.90
12. ...	7.00	6.00	5.40	8.20	5.00	5.50	4.70	4.70	4.60	4.90	6.20	5.90
13.....	7.00	5.90	5.40	8.00	5.00	5.50	4.70	4.70	4.60	4.80	6.40	5.80
14.....	7.20	5.80	6.50	7.90	5.00	5.30	4.70	4.65	4.60	4.80	6.50	5.90
15.....	7.20	5.70	7.70	7.60	4.90	5.30	4.70	4.60	4.60	4.80	6.50	5.90
16.....	7.20	5.60	8.30	7.40	4.90	5.30	4.70	4.70	4.60	4.80	6.50	5.90
17.....	7.20	5.60	8.70	7.00	4.90	5.25	4.70	4.60	4.60	4.80	6.50	6.00
18.....	7.50	5.60	8.80	6.80	4.90	5.20	4.70	4.60	4.60	4.80	6.20	5.95
19.....	8.20	5.40	8.80	6.60	4.90	5.20	4.70	4.60	4.60	4.80	6.10	5.80
20.....	8.70	5.40	8.80	6.40	4.90	5.10	4.70	4.60	4.60	5.00	6.20	5.90
21.....	9.20	5.40	8.50	6.40	4.90	5.00	4.75	4.60	4.60	5.30	6.20	6.00
22.....	9.40	5.40	8.40	6.20	4.90	5.00	4.80	4.60	4.70	5.40	6.50	5.95
23.....	9.40	5.50	8.20	6.20	4.90	5.00	4.80	4.60	4.70	5.90	6.60	5.85
24.....	9.40	5.60	8.20	6.00	4.90	5.00	4.80	4.60	4.70	6.00	6.60	5.80
25.....	9.20	5.60	7.90	5.80	4.90	5.00	4.80	4.60	4.70	6.10	6.40	5.80
26.....	9.10	5.50	8.00	5.70	4.90	5.00	4.80	4.60	4.70	6.10	6.40	5.60
27.....	8.70	5.50	8.40	5.70	4.90	4.90	4.80	4.60	4.70	6.40	6.40	5.75
28.....	8.50	5.50	8.80	5.60	5.05	4.85	4.80	4.60	4.70	6.60	6.40	5.65
29.....	8.20	......	9.20	5.60	5.25	4.90	4.80	4.60	4.70	6.60	6.40	5.60
30.....	7.90	......	9.40	5.50	5.50	4.90	4.80	4.60	4.65	6.60	6.20	5.55
31.....	7.60	......	9.80	......	5.65	......	4.80	4.60	......	6.50	......	5.50

NOTE.— Gage heights not affected by ice. Recorded to nearest tenth of a foot.

Current-meter Discharge Measurements of Oswegatchie River near Ogdensburg, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Aug. 23 *a*	C. S. De Golyer.....	4.66	877	5	0.2 & 0.8	232	196	1.96	454
Aug. 23 *a*	C. S. De Golyer.....	4.63	877	5	0.2 & 0.8	182	138	2.26	411
Oct. 29	G. H. Canfield......	6.52	877	5	0.2 & 0.8	771	256	4.88	3,760
Oct. 31	G. H. Canfield......	6.46	877	5	0.2 & 0.8	707	254	4.99	3,520
Dec. 6	C. S. De Golyer.....	5.89	912	5	0.2 & 0.8	581	254	4.10	2,380
Dec. 6	C. S. De Golyer.....	5.89	912	5	0.2 & 0.8	523	254	4.44	2,320

a Made by wading above gage.

Mean Daily Discharge, Second-feet, of Oswegatchie River near Ogdensburg, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	3,730	7,850	2,180	16,500	1,620	2,260	850	600	300	390	3,930	2,770
2	4,020	7,550	2,180	14,800	1,620	1,970	720	490	300	545	2,770	2,560
3	4,020	6,960	2,180	13,800	1,450	1,970	720	490	390	600	2,770	2,560
4	5,180	6,660	2,180	13,800	1,450	1,970	720	545	390	600	2,770	2,770
5	6,360	6,360	1,970	14,800	1,370	1,880	720	490	390	600	2,770	2,360
6	6,360	5,480	1,970	13,800	1,290	1,620	600	490	390	600	2,560	2,360
7	6,360	4,890	1,970	13,800	900	1,620	600	490	390	600	2,360	2,460
8	6,660	4,020	1,770	13,800	850	1,540	600	490	390	600	2,360	2,560
9	6,360	4,020	1,770	12,800	850	1,620	490	490	300	720	1,790	2,360
10	6,360	3,730	1,770	11,800	850	1,620	490	390	345	720	2,560	2,360
11	6,360	3,440	1,770	10,500	850	1,620	490	390	390	720	2,990	2,360
12	6,360	3,440	1,970	9,210	850	1,620	490	490	390	720	2,990	2,360
13	6,360	3,160	1,970	8,400	850	1,620	490	490	390	600	3,440	2,160
14	6,960	2,890	4,890	8,020	850	1,290	490	440	390	600	3,680	2,360
15	6,960	2,640	8,450	6,940	720	1,290	490	390	390	600	3,680	2,360
16	6,960	2,400	10,300	6,250	720	1,290	490	490	390	600	3,680	2,360
17	6,960	2,400	11,500	5,010	720	1,220	490	390	390	600	3,680	2,560
18	7,850	2,400	11,800	4,460	720	1,140	490	390	390	600	2,990	2,460
19	9,960	1,970	11,800	3,930	720	1,140	490	390	390	600	2,770	2,160
20	11,500	1,970	11,800	3,440	720	980	490	390	390	850	2,990	2,360
21	13,000	1,970	10,900	3,440	720	850	545	390	390	1,290	2,990	2,560
22	13,600	1,970	10,600	2,990	720	850	600	390	490	1,450	3,680	2,460
23	13,600	2,180	9,960	2,990	720	850	600	390	490	2,360	3,930	2,260
24	13,600	2,400	9,960	2,560	720	850	600	390	490	2,560	3,930	2,160
25	13,000	2,400	9,050	2,160	720	850	600	390	490	2,770	3,440	2,160
26	12,700	2,180	9,350	1,970	720	850	600	390	490	2,770	3,440	1,790
27	11,500	2,180	10,600	1,970	720	720	600	390	490	3,440	3,440	2,060
28	10,900	2,180	11,800	1,790	920	662	600	390	490	3,930	3,440	1,880
29	9,960	.....	13,000	1,790	1,220	720	600	390	490	3,930	3,440	1,790
30	9,050	.....	13,600	1,620	1,620	720	600	390	440	3,930	2,990	1,700
31	8,150	.....	14,900	.....	1,880	.....	600	390	.....	3,680	.....	1,620

NOTE.—Discharge measurements made during 1913 indicate a change in the rating. A new rating table is used, beginning April 1, 1913.

Monthly Discharge of Oswegatchie River near Ogdensburg, N. Y.

[Drainage area, 1,580 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF
	Maximum.	Minimum	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	13,600	3,730	8,410	5.32	6.13
February	7,850	1,970	3,630	2.30	2.40
March	14,900	1,770	7,090	4.49	5.18
April	16,500	1,620	7,640	4.84	5.46
May	1,880	720	992	0.628	0.72
June	2,260	662	1,310	0.829	0.92
July	850	490	581	0.368	0.42
August	600	390	436	0.276	0.32
September	490	300	408	0.258	0.29
October	3,930	390	1,440	0.911	1.05
November	3,930	1,790	3,140	1.99	2.22
December	2,770	1,620	2,360	1.46	1.68

EAST BRANCH OF OSWEGATCHIE RIVER AT NEWTON FALLS, N. Y.

This gaging station is located 600 feet below the lower dam of the Newton Falls Paper Company in the village of Newton Falls. It is four miles above the mouth of Little river and 10 miles below the outlet of Cranberry lake. The drainage area at this point is 166 square miles.

A vertical staff gage is read twice daily. The channel consists of small boulders and gravel, covered with waste from the pulp mill upstream.

At low stages current-meter discharge measurements are made by wading at a point about 300 feet upstream from the gage. During high water measurements are made from a cable 30 feet upstream from the gage. The paper mill upstream from this station causes some daily fluctuation, but probably not enough to materially effect the accuracy of the records. The seasonal flow is largely controlled by a dam at Cranberry lake.

This station is maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission and the Newton Falls Paper Company.

Mean Daily Gage Height, in Feet, of East Branch, Oswegatchie River, at Newton Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	2.40	3.30	2.00	5.60	1.95	1.50	1.60	2.00	1.60	1.90	2.30	2.30
2.....	2.10	3.10	0.48	5.20	1.95	2.40	1.75	2.00	1.90	1.90	1.15	2.25
3.....	1.95	3.00	2.35	5.00	1.95	2.35	1.50	0.60	1.90	1.90	2.20	2.15
4.....	2.40	2.90	2.30	5.20	0.80	2.35	0.10	1.70	1.90	1.90	2.20	1.90
5.....	2.20	2.80	2.05	5.20	2.00	2.30	.....	2.15	1.90	0.45	2.15	2.05
6.....	3.10	2.80	1.95	5.20	1.95	1.95	.....	2.10	2.10	2.00	2.00	2.25
7.....	2.90	2.70	1.95	5.20	1.95	2.10	.....	2.10	0.85	1.90	1.90	0.95
8.....	2.80	2.60	1.75	4.90	1.95	1.75	.....	2.10	1.90	1.95	1.90	2.30
9.....	2.80	......	0.70	4.60	2.10	2.45	2.30	2.10	2.20	1.90	0.70	2.30
10.....	2.80	......	2.10	4.50	1.95	2.10	2.15	0.45	2.20	1.90	2.50	2.05
11.....	3.00	......	2.15	4.20	0.28	2.10	2.15	1.50	2.20	1.85	2.30	2.05
12.....	3.20	......	2.30	3.80	1.70	2.00	2.15	1.85	2.20	0.42	2.30	2.30
13.....	3.40	......	2.10	3.40	1.75	2.00	1.50	1.85	2.00	1.60	2.30	2.30
14.....	3.10	......	2.10	3.00	1.75	1.90	2.00	1.90	0.48	2.10	2.35	0.80
15.....	3.10	......	2.45	2.60	1.65	1.75	2.15	1.90	1.50	1.95	2.35	2.30
16.....	3.10	......	3.00	2.60	1.65	2.20	1.85	1.90	1.90	1.90	1.10	2.30
17.....	3.40	......	3.40	2.50	1.65	2.00	1.85	0.42	1.90	1.85	2.25	2.30
18.....	3.70	......	3.40	2.50	0.22	2.00	1.90	1.60	1.90	1.85	2.20	2.30
19.....	3.80	2.30	3.30	2.45	1.70	2.50	2.10	1.95	1.90	0.30	2.30	2.30
20.....	3.80	2.30	3.40	1.80	1.65	2.35	0.55	1.95	1.90	1.90	2.60	2.05
21.....	4.40	2.40	3.60	2.40	1.65	1.90	2.40	1.95	0.80	2.05	2.70	0.10
22.....	4.40	2.60	4.00	2.35	1.70	0.60	2.50	1.95	1.80	2.25	2.30	1.80
23.....	4.40	1.30	4.00	2.40	1.70	1.65	2.30	1.95	2.10	2.40	2.10	2.05
24.....	4.40	2.30	4.20	2.35	1.90	1.60	2.05	0.80	2.15	2.60	2.30	1.90
25.....	4.30	2.30	4.60	2.60	0.12	1.60	1.85	0.70	2.25	2.80	2.20	0.80
26.....	4.10	2.30	5.30	2.80	1.80	1.60	1.85	1.90	2.10	2.80	2.20	1.45
27.....	4.00	2.30	5.60	1.00	1.95	1.70	0.20	1.95	1.90	3.00	2.10	1.70
28.....	3.80	2.20	6.00	2.40	2.50	1.70	1.50	1.90	0.45	2.90	2.00	1.70
29.....	3.60	......	6.00	2.35	2.40	0.30	1.95	1.90	1.55	2.80	2.00	1.70
30.....	3.50	......	5.80	2.15	2.30	1.65	1.95	1.90	2.00	2.80	2.00	1.70
31.....	3.40	......	6.00	......	2.30	......	2.00	0.40	......	2.30	......	1.85

NOTE.— Gage observations suspended on account of ice from February 9 to 18, inclusive, and from July 5 to 8, inclusive, on account of brush lodged temporarily on the control. Daily gage heights computed from two observations per day, weighted from records of time of changing wheels and gates at the paper mill.

Current-Meter Discharge Measurements of East Branch, Oswegatchie River, at Newton Falls, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.			*Feet.*		*Sq ft.*	*Feet.*	*Sec.-ft.*
Mar. 14.....	R. S. Barnes........	1.99	5	0.2 & 0.8	294	120	342
April 16.....	R. S. Barnes........	2.90	5	0.2 & 0.8	408	123	565

Mean Daily Discharge, Second-feet, of East Branch, Oswegatchie River, at Newton Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	394	678	290	1,680	278	183	202	290	202	266	366	366
2	314	610	55	1,480	278	394	233	290	266	266	127	353
3	278	576	380	1,380	278	380	183	65	266	266	340	327
4	394	544	366	1,480	84	380	30	222	266	266	340	266
5	340	512	302	1,480	290	366	180	327	266	53	327	302
6	610	512	278	1,480	278	278	80	314	314	290	290	353
7	544	482	278	1,480	278	314	220	314	90	266	266	101
8	512	452	233	1,330	278	233	300	314	266	278	266	366
9	512	440	74	1,200	314	408	366	414	340	266	74	366
10	512	423	314	1,150	278	314	327	53	340	266	422	302
11	576	410	327	1,020	41	314	327	183	340	255	366	302
12	644	400	366	862	222	290	327	255	340	51	366	366
13	714	390	314	714	233	290	183	255	290	202	366	366
14	610	385	314	576	233	266	290	266	55	314	380	84
15	610	380	408	452	212	233	327	266	183	278	380	366
16	610	377	576	452	212	340	255	266	266	266	120	366
17	714	373	714	422	212	290	255	51	266	255	353	366
18	824	370	714	422	37	290	266	202	266	255	340	366
19	862	366	678	408	222	422	314	278	266	42	366	366
20	862	366	714	244	212	380	61	278	266	266	452	302
21	1,100	394	786	394	212	266	394	278	84	302	482	30
22	1,100	452	940	380	222	65	422	278	244	353	366	244
23	1,100	149	940	394	222	212	366	278	314	394	314	302
24	1,100	366	1,020	380	266	202	302	84	327	452	366	266
25	1,060	366	1,200	452	31	202	255	74	353	512	340	84
26	980	366	1,530	512	244	202	255	266	314	512	340	174
27	940	366	1,680	107	278	222	36	278	266	576	314	222
28	862	340	1,890	394	422	222	183	266	53	544	290	222
29	786	......	1,890	380	394	42	278	266	192	512	290	222
30	750	......	1,780	327	366	212	278	266	290	512	290	222
31	714	......	1,890	......	366	......	290	49	......	366	......	255
Mean	707	423	750	781	242	274	251	232	253	313	323	277

NOTE.— Daily discharges, February 9 to 18, inclusive, estimated by interpolation, taking temperature and precipitation into consideration. Daily discharge, July 5 to 8, estimated.

Monthly Discharge of East Branch, Oswegatchie River, at Newton Falls, N. Y.

[Drainage area, 166 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	1,100	278	707	4.26	4.91
February	678	149	423	2.55	2.66
March	1,890	55	750	4.52	5.21
April	1,680	107	781	4.70	5.24
May	422	31	242	1.46	1.68
June	422	42	274	1.65	1.84
July	422	30	251	1.51	1.74
August	327	49	232	1.40	1.61
September	353	53	253	1.52	1.70
October	576	42	313	1.89	2.18
November	482	74	323	1.95	2.18
December	366	30	277	1.67	1.92

LAKE CHAMPLAIN DRAINAGE BASIN.

DESCRIPTION OF BASIN.

Lake Champlain occupies a long and narrow valley, extending in a north-south direction and forming a part of the boundary between New York and Vermont. The elevation of the lake is about ninety-five feet above tide and the water-surface area is 436 square miles.

The drainage basin is irregular in form, being about seventy-five miles wide from a point opposite Middlebury, Vt., northward to the outlet of the lake at Rouses Point, on the international boundary. South of Middlebury the average width of the basin is about thirty-five miles and the lake itself is very narrow, forming virtually a drowned river.

The tributary region is rugged and mountainous, mostly covered with forest and with little depth of soil except in the stream valleys. The drainage is received almost entirely through large tributaries, there being little direct coast drainage into the lake. The outlet of the lake is Richelieu river, which flows northward from Rouses Point to St. Lawrence river.

In estimating the run-off from this basin in previous years the drainage area has been taken as 7,750 square miles. Maps have recently become available from which the area of the lake and its tributary drainage basin have been more accurately determined, as shown in the following table:*

Drainage Areas Tributary to Lake Champlain.

LOCALITY.	AREA IN SQUARE MILES.		
	Place to place.	Sub-total.	Total.
Pike river and adjacent area in Canada	....	[a]242.00	....
Missisquoi river in Canada	....	[b]245.00	....
Land area in Canada above outlet	....	....	487.00
Missisquoi river in Vermont	....	[b]615.00	....
(Total Missisquoi river, 860 square miles.)			
Lamoille river	....	[b]725.00	....
Winooski river	....	[b]995.00	....
Otter creek	....	[b]935.00	....
Eastern coast drainage	....	[b]534.40	....
Mettawee, Poultney and Castleton rivers in Vermont	....	[c]376.00	....

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* Table here presented is a revision of that appearing in the 1907 report.

[a] From maps of Canadian Geological Survey. Scale: 1 inch = 4 miles.

[b] United States post-route maps. Scale: 1 inch = 12.5 miles.

[c] Topographic maps of U. S. G. S. Scale: 1 inch = 1 mile (nearly).

Lake Champlain Drainage — (Continued).

LOCALITY.	AREA IN SQUARE MILES.		
	Place to place.	Sub-total.	Total.
Land area in Vermont, except islands			4,180.40
Wood creek above Smiths Basin	18.60		
Big creek above junction with Wood creek	35.16	53.76	
Wood creek, Smiths Basin to Fort Ann	9.90	63.66	
Halfway creek above Kane's falls	78.82		
Halfway creek, Kane's falls to junction with Wood creek at Fort Ann	6.69	85.51	
Wood creek at Fort Ann, including Halfway creek		149.17	
Wood creek, Fort Ann to junction with Mettawee	55.73	204.90	
Mettawee river in Vermont	151.90		
Mettawee river in New York	55.70		
Total, Mettawee river		207.60	
Total, Wood creek and Mettawee river at junction		412.50	
Wood creek junction, Mettawee river to Whitehall	13.65	426.15	
Wood creek, Whitehall to junction with Poultney river	1.65	427.80	
Castleton river, in Vermont	100.90		
Poultney river, including Castleton river in Vermont		254.80	
Poultney river in New York		11.00	
Poultney river, total to junction with Wood creek		265.80	
Total, Wood creek and Poultney river at junction			693.60
Wood creek, Mettawee and Poultney rivers in New York			286.90
Lake George outlet		220.10	
Bouquet river		*c*268.10	
Ausable river		*d*521.30	
Little Ausable river		*d*75.10	
Saranac river		*d*629.60	
Little Chazy river		*c*63.80	
Big Chazy river		*d*299.40	
Western coast drainage		*a*344.60	
Land area in New York, except islands			2,708.90
Islands in New York		*e*55.20	
Total land area above outlet			7,431.50
Water-surface in Canada		*e*16.50	
Water-surface in United States		*e*419.10	
Total water-surface		435.60	
Total drainage area above outlet			7,867.10
Richelieu river, Rouses Point to Chambly	*a*310.00		
Total drainage area above Chambly			8,177.10
Richelieu river, Chambly to mouth	*a*626.30		
Richelieu river, total		936.30	
Total drainage area above mouth			8,803.40

a From maps of Canadian Geological Survey. Scale: 1 inch = 4 miles.
c Topographic maps of U. S. G. S. Scale: 1 inch = 1 mile (nearly).
d Bien's Atlas of New York. Scale: 1 inch = 2.5 miles.
e Charts of U. S. Coast and Geodetic Survey. Scale: 1: 40,000.

RICHELIEU RIVER AT FORT MONTGOMERY, ROUSES POINT, N. Y.

A record of the height of Lake Champlain at Rouses Point, at the head of Richelieu river, the outlet of the lake, has been kept at Fort Montgomery, by the United States Corps of Engineers, beginning in 1875. Through the courtesy of Capt. Harry Taylor, the gage readings taken by William McComb, the fort keeper, at 9 A. M. each day, are reported weekly to the United States Geological Survey.

The depth of the water is taken on a reference mark on the base of the scarp wall, at the north face of bastion B, about three feet from the angle with the east curtain of Fort Montgomery. This reference point is 1.50 feet above an assumed zero, and 1.50 is added to the measured depth to determine the gage reading. In winter the depth as the water rises in a hole in the ice is commonly taken. On windy days the depth is taken in a well within the fort inclosure by measuring the depth on a flagstone in the bottom of the well.

Elevations at Fort Montgomery.	Feet above tide.
Elevation of reference point on scarp wall of Fort Montgomery [a]	94.998
Elevation of gage zero	93.501
Assumed high water, Lake Champlain	102.611
Assumed low water, Lake Champlain	93.361

[a] United States Deep Waterways report, part 1, p. 420.

The range of rise and fall of the lake is thus seen to be 9.25 feet, representing an available storage volume of about six inches on the entire catchment area above the outlet.

The land drainage area above Rouses Point is 7,432 square miles. The water-surface of the lake is 436 square miles, making the total area at the foot of the lake 7,868 square miles.

Mean Daily Gage Height, in Feet, of Richelieu River at Fort Montgomery, Rouses Point, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	95.40	100.30	98.10	96.30	94.90	94.00	93.10	92.70	93.25	93.40
2	......	......	95.40	100.00	98.00	96.20	94.80	93.90	93.10	92.75	93.05	93.30
3	......	......	95.30	100.20	97.90	96.30	94.75	93.60	93.15	92.80	93.25	93.10
4	95.30	......	95.20	100.30	97.85	96.10	94.80	93.70	93.00	92.80	93.10	93.30
5	......	......	95.25	100.40	97.80	96.20	94.65	93.80	93.00	92.85	93.00	93.35
6	......	......	95.20	100.45	97.60	96.30	94.60	93.90	93.05	92.95	93.20	93.25
7	......	......	95.15	100.40	97.40	95.90	94.50	93.60	93.15	92.95	93.25	93.50
8	95.20	......	95.20	100.35	97.30	95.95	94.45	93.80	92.95	92.90	93.30	93.45
9	......	......	95.15	100.30	97.20	95.90	94.70	93.70	92.85	92.85	93.10	93.50
10	......	......	95.10	100.25	97.00	95.90	94.40	93.70	92.90	92.80	93.70	93.70
11	......	......	95.15	100.40	96.90	96.00	94.30	93.55	92.80	93.10	93.20	93.20
12	......	......	95.10	100.00	96.80	95.80	94.40	93.60	92.90	92.85	93.10	93.70
13	......	......	95.25	99.95	96.90	96.00	94.45	93.50	92.85	92.80	93.35	93.60
14	......	......	95.35	99.90	96.60	95.70	94.25	93.60	92.80	92.60	93.10	93.50
15	......	......	95.75	99.80	96.55	95.65	94.15	93.60	92.80	92.75	93.10	93.60
16	......	......	96.10	99.70	96.60	95.55	94.15	93.55	92.80	92.60	93.15	93.65
17	......	......	96.50	99.50	96.50	95.50	94.20	93.45	93.05	92.70	93.25	93.70
18	......	......	96.70	100.00	96.40	95.40	94.15	93.30	92.70	93.00	93.25	93.60
19	......	......	96.70	99.20	96.30	95.45	94.10	93.30	92.75	92.70	93.15	93.60
20	......	......	96.65	99.00	96.25	95.40	94.05	93.25	92.80	92.90	93.20	93.80
21	......	......	96.80	99.20	96.20	95.30	94.00	93.30	92.90	93.00	93.20	93.60
22	......	......	97.00	99.30	96.30	95.25	94.10	93.35	92.80	92.90	93.30	93.55
23	......	......	97.20	99.00	96.10	95.20	94.20	93.30	92.90	93.60	93.25	93.50
24	......	......	97.80	98.90	96.00	95.20	94.00	93.25	92.85	92.90	93.30	93.60
25	......	......	97.45	98.80	96.00	95.10	93.90	93.20	93.00	92.80	93.20	93.60
26	......	......	98.30	98.65	96.00	95.30	93.80	93.50	93.05	92.85	93.15	.....
27	......	......	98.60	98.50	95.95	95.05	93.90	93.20	92.80	93.00	93.20	93.65
28	......	......	99.40	98.40	96.00	94.95	93.95	93.15	93.00	93.10	93.50	93.60
29	......	......	100.20	98.25	95.85	95.00	93.90	93.30	92.80	93.10	93.25	93.65
30	......	......	100.40	98.10	96.20	94.95	93.85	93.15	92.75	93.00	93.30	93.65
31	......	......	100.10	......	96.30	......	93.80	93.20	......	93.05	......	93.55

NOTE.— No record for January and February, except as noted.

SARANAC RIVER.

Saranac river rises in southeastern Franklin county, and flows northeastward to a point near Cadyville and thence eastward into Lake Champlain at Plattsburg. The southern boundary of the basin is the Ampersand mountain range, and the stream drains the north slope of the most elevated region of the state of New York. About 16.2 per cent of the upper drainage area is water-surface. The areas tributary to the river are shown in the following table:

Drainage Areas of Saranac River [a]

LOCATION.	Area.	Total area.
	Square miles.	*Square miles.*
Above Saranac lake State dam	....	157.50
Above Saranac Lake village	44.90	202.40
Above Franklin Falls	104.30	306.70
North branch, Saranac river	136.60	136.60
At junction, North branch	....	498.80
Above High Falls	19.60	518.40
Above Cadyville	74.60	593.00
Above Kent Falls	2.90	595.90
Above Morrisonville	2.00	597.90
Above Lozier dam	26.10	624.00
Above mouth	5.60	629.60

[a] From Bien's Atlas of New York.

The results of gagings of Saranac river at a station formerly maintained at Saranac lake are given in the report of the State Engineer and Surveyor for 1903, supplement, pages 71–74.

In 1854 a timber dam was built below lower Saranac lake for the purpose of flooding logs. In 1899–1901 a masonry dam and lock were erected by the State at this point.

SARANAC RIVER NEAR PLATTSBURG, N. Y.

A gaging station was established by Robert E. Horton at the dam of the Plattsburg Light, Heat and Power Company, six miles above Plattsburg, March 17, 1903. This station is maintained by the U. S. Geological Survey in coöperation with this Department.

The record includes the flow over a straight spillway crest 171.25 feet in length, the discharge through two five-foot waste gates when open, and the discharge through five thirty-three-inch Victor turbines controlled by automatic governors. The gages were read and the record furnished by A. E. Hare until January, 1907; since then the record has been furnished by the company. Experiments were made at Cornell University hydraulic laboratory on a model of the ogee section of the dam, from which coefficients have been derived from the calculation of the discharge.

Current-meter measurements have been made in the tail-race to calibrate the turbines.

Current-meter Discharge Measurements of Saranac River near Plattsburg, N. Y.

DATE.	Hydrographer.	Mean gage reading.*g*	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
July 26 *a*	G. J. Lyon	2.22	4	0.2 & 0.8	166	57	2.09	347
July 27 *a*	G. J. Lyon	1.66	4	0.2 & 0.8	166	56	1.41	187
July 27 *a*	G. J. Lyon	1.58	4	0.2 & 0.8	128	57	1.31	168
July 27 *a*	G. J. Lyon	1.62	4	0.2 & 0.8	136	56.5	1.34	182
July 27 *a*	G. J. Lyon	1.85	4	0.2 & 0.8	150	57	1.70	255
July 28 *a*	G. J. Lyon	2.24	4	0.2 & 0.8	170	57.5	2.08	353
July 29 *a*	G. J. Lyon	2.91	4	0.2 & 0.8	190	52	2.92	556
July 29 *b*	G. J. Lyon	2.70	4	0.2 & 0.8	186	56.5	2.72	507
July 31 *b*	G. J. Lyon	2.78	4	0.2 & 0.8	191	57.5	2.74	523
Aug. 2 *c*	G. J. Lyon	2.17	5	0.6	209	165	2.69	562
Aug. 3 *d*	G. J. Lyon	2.01	5	0.2 & 0.8	178	160	2.33	415
Aug. 4 *c*	G. J. Lyon	2.93	5	0.2 & 0.8	277	170	3.47	961
Sept. 2 *e*	G. J. Lyon	2.18	4	0.2 & 0.8	154	56	2.11	325
Sept. 2 *e*	G. J. Lyon	1.98	4	0.2 & 0.8	142	56	1.72	244
Sept. 3 *e*	G. J. Lyon	1.79	4	0.2 & 0.8	135	55.5	1.52	204
Sept. 3 *e*	G. J. Lyon	1.66	4	0.2 & 0.8	127	55.5	1.37	174
Sept. 22 *f*	G. H. Canfield	2.20	3	0.2 & 0.8	86.7	55.2	3.97	344
Sept. 24 *a*	G. H. Canfield	2.22	3	0.2 & 0.8	84.3	54.5	4.04	341
Sept. 23 *a*	G. H. Canfield	0.64	2	0.2 & 0.8	20.4	26	0.68	14
Sept. 28 *a*	G. H. Canfield	1.45	3	0.2 & 0.8	53.0	53.5	2.55	135
Sept. 28 *a*	G. H. Canfield	0.97	2	0.2 & 0.8	31.5	30	1.46	45.9
Sept. 28 *a*	G. H. Canfield	1.82	3	0.2 & 0.8	67.8	54.7	3.28	222

a Measurement made at lower tail race section. *b* Measurement made at upper tail race section. *c* Measurement made from cable. *d* Measurement made by wading under cable. *e* Measurement made from boat. *f* Measurement made by wading 200 feet below gage. *g* Tail race gage readings.

AUSABLE RIVER.

DESCRIPTION.

Ausable river rises in the Adirondack mountains in the northwestern part of Essex county and flows northeasterly into Lake Champlain near Port Kent. This stream drains a rugged, mountainous area, nearly all forest covered. Two main branches unite at Ausable Forks, about 20 miles from the mouth of the stream along river. In this twenty miles a total descent of 460 feet occurs, a portion of which is in the famous Ausable chasm.

The east branch of the Ausable river drains a long, narrow basin, extending northeasterly and southwesterly. There are few lakes, aside from Ausable lakes, which are at the head of the stream. Tributaries are numerous.

The west branch of Ausable river receives the outflow from Lake Placid at elevation 1,864 feet. Numerous smaller lakes feed this branch of the river. Its drainage basin occupies a plateau at a general elevation of 800 to 1,200 feet, the mountainous boundaries of the watershed rising to altitudes of 3,000 to 5.000 feet.

Drainage Areas of Ausable River.a

LOCATION.	AREA.	
	Place to place.	Total.
	Square miles.	*Square miles.*
Lake Placid, water-surface	....	3.80
Lake Placid, drainage area	21.80	21.80
West branch from foot of Lake Placid to junction with east branch	211.20	233.00
East branch above forks	196.90	429.90
Above gaging station	40.10	470.00
Gaging station to Keeseville	6.10	476.10
Keeseville to Birmingham	27.40	503.50
Birmingham to mouth	17.80	521.30

a From Willsboro, Ausable, Lake Placid, Mount Marcy, and Elizabethtown sheets of the United States Geological Survey topographic atlas.

AUSABLE RIVER AT AUSABLE FORKS, N. Y.

This station is located in the village of Ausable Forks, N. Y., immediately below the junction of the east and west branches of the stream and about 15 miles above the mouth. The drainage area at this point is 444 square miles.

A chain gage is located about 100 feet below the junction of the two branches of the river and current-meter measurements are made at a cable station located about one and one-half miles farther downstream.

This station is maintained by the U. S. Geological Survey in coöperation with the State Conservation Commission.

Mean Daily Gage Height, in Feet, of Ausable River at Ausable Forks, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	4.12	3.70	5.05	4.30	4.25	3.65	3.64	......	3.55	3.88	3.76
2	......	4.19	3.62	4.46	4.22	4.22	3.69	3.54	......	3.89	3.78	3.82
3	......	......	4.00	4.55	4.20	4.10	3.62	3.50	......	4.25	3.78	3.86
4	......	......	3.76	6.00	4.16	3.97	3.58	3.85	3.55	4.08	3.76	3.94
5	......	......	3.62	6.60	4.10	3.94	3.54	3.68	3.54	3.86	3.74	4.15
6	......	......	3.68	5.20	4.09	3.94	3.69	3.62	3.54	3.80	3.71	4.24
7	......	......	3.92	4.80	4.10	3.95	3.78	3.62	3.46	3.80	3.68	4.27
8	......	......	4.09	4.50	4.05	3.97	3.70	3.61	3.60	3.72	3.63	4.35
9	......	......	3.64	4.35	3.90	4.00	3.64	3.62	3.55	3.64	3.82	4.15
10	......	......	4.24	4.27	3.85	3.98	3.58	3.50	3.58	3.62	5.45	4.10
11	......	......	4.18	4.26	3.65	3.96	3.52	3.50	3.52	3.56	4.55	4.25
12	......	......	3.99	4.60	3.70	3.92	3.51	3.50	3.55	3.58	4.34	4.08
13	......	......	4.24	4.60	3.90	3.80	3.55	3.50	3.51	3.72	4.33	3.93
14	......	......	5.50	4.50	3.90	3.71	3.68	3.50	3.58	3.67	4.45	3.86
15	......	......	6.40	4.65	3.86	3.68	3.65	3.50	3.64	3.72	4.20	3.82
16	......	......	5.50	4.50	3.84	3.83	......	3.50	3.56	3.71	3.94	3.77
17	......	......	4.45	4.35	3.92	3.82	......	3.41	3.58	3.64	3.88	3.75
18	......	......	4.42	4.35	3.90	3.82	......	3.44	3.58	3.64	3.86	3.72
19	......	......	4.32	4.50	3.86	3.80	3.61	3.44	3.56	3.62	3.82	3.66
20	......	......	4.20	4.40	3.82	3.80	3.56	3.48	3.58	3.92	4.35	3.66
21	......	......	5.25	4.29	3.88	3.75	3.62	3.50	3.49	4.70	4.62	3.68
22	......	......	5.90	4.22	4.65	3.69	3.71	3.57	4.15	4.50	4.45	3.68
23	......	......	4.50	4.75	4.40	3.66	3.68	3.56	4.22	4.45	4.18	3.75
24	......	......	4.70	4.80	3.98	3.66	3.64	3.54	3.92	4.00	4.10	3.68
25	......	......	7.10	4.70	3.96	3.66	3.62	3.78	3.82	4.25	4.65	3.74
26	......	......	6.80	4.70	4.00	3.64	3.60	3.76	3.70	4.35	4.50	3.68
27	4.35	......	8.60	4.65	4.01	3.65	3.58	3.73	3.62	4.28	4.30	3.72
28	4.19	3.67	6.90	4.60	5.00	3.86	3.78	3.65	3.55	4.15	3.88	3.82
29	4.37	......	5.15	4.60	5.20	3.78	4.05	3.58	3.66	4.50	3.81	3.72
30	4.15	......	4.60	4.55	4.90	3.74	3.95	3.55	3.56	4.05	3.74	3.88
31	3.98	......	4.60	......	4.50	......	3.80	3.55	......	4.50	......	3.82

NOTE.— Gage observations suspended, January 1 to 26, inclusive, and February 3 to 27. Gage heights affected by ice, December 27 to 31.

Current-meter Discharge Measurements of Ausable River at Ausable Forks, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Feb. 28 *a*	C. S. De Golyer	3.67	10	0.2 & 0.8	257	195	0.88	226
April 21	R. S. Barnes	4.27	5	0.2 & 0.8	425	175	2.00	950
Sept. 18 *b*	G. H. Canfield	3.59	4	0.2 & 0.8	175	168	1.06	185

a Made under complete ice cover, 2,000 feet below gage. *b* Made by wading under cable.

Mean Daily Discharge, Second-feet, of Ausable River at Ausable Forks, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	748	273	2,450	1,000	932	234	226	160	160	452	329
2	......	846	210	1,260	889	889	265	154	160	462	348	388
3	......	......	590	1,420	860	720	210	127	160	932	348	431
4	......	......	329	5,200	804	555	181	420	160	694	331	520
5	......	......	210	7,270	720	520	154	257	154	431	311	790
6	......	......	257	2,820	707	520	265	210	154	367	282	918
7	......	......	496	1,900	720	532	348	210	107	367	257	962
8	......	......	707	1,330	655	555	273	202	194	292	218	1,080
9	......	......	226	1,080	473	590	226	210	160	226	388	790
10	......	......	918	962	420	567	181	127	181	210	3,500	720
11	......	......	832	947	234	543	140	127	140	167	1,420	932
12	......	......	578	1,510	273	496	134	127	160	181	1,070	694
13	......	......	918	1,510	473	367	160	127	134	292	1,050	508
14	......	......	3,640	1,330	473	282	257	127	181	249	1,250	431
15	......	......	6,560	1,600	431	257	234	127	226	292	860	388
16	......	......	3,640	1,330	409	399	230	127	167	282	520	339
17	......	......	1,250	1,080	496	388	220	82	181	226	452	320
18	......	......	1,200	1,080	473	388	210	97	181	226	431	292
19	......	......	1,040	1,330	431	367	202	97	167	210	388	241
20	......	......	860	1,160	388	367	167	117	181	496	1,080	241
21	......	......	2,940	990	452	320	210	127	122	1,700	1,550	257
22	......	......	4,880	889	1,600	265	282	174	790	1,330	1,250	257
23	......	......	1,330	1,800	1,160	241	257	167	889	1,250	832	320
24	......	......	1,700	1,900	567	241	226	154	496	590	720	257
25	......	......	9,130	1,700	543	241	210	348	388	932	1,600	311
26	......	......	8,000	1,700	590	226	194	329	273	1,080	1,330	257
27	1,080	......	15,000	1,600	603	234	181	301	210	976	1,000	256
28	846	226	8,370	1,510	2,340	431	348	234	160	790	452	255
29	1,120	......	2,690	1,510	2,820	348	655	181	241	1,330	378	254
30	790	......	1,510	1,420	2,110	311	532	160	167	655	311	253
31	567	......	1,510	......	1,330	......	367	160	......	1,330	......	252

NOTE.— Daily discharge, July 16 and 18 and September 1 to 3, interpolated. Daily discharge, December 27 to 31, estimated, using discharge measurement made January 1, 1914.

Monthly Discharge of Ausable River at Ausable Forks, N. Y.
[Drainage area, 444 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
March	15,000	210	2,640	5.95	6.86
April	7,270	889	1,790	4.03	4.50
May	2,820	234	821	1.85	2.13
June	932	226	406	0.914	1.02
July	655	134	250	0.563	0.65
August	420	82	182	0.41	0.47
September	889	107	229	0.516	0.58
October	1,700	160	604	1.36	1.57
November	3,500	218	813	1.83	2.04
December	1,080	241	459	1.03	1.19

WOOD CREEK DRAINAGE BASIN.

DESCRIPTION.

Wood creek flowed originally along a tortuous course in a flat valley skirted by bold slopes, the general course being northerly from a point five miles east of Hudson river at Fort Edward. From Smiths Basin northerly, it is alternately paralleled by and canalized to form Champlain canal, so that the flow of this portion of the stream is artificially controlled.

Half Way creek, the principal tributary of Wood creek, from the west, enters at Fort Ann. This stream receives the drainage from Putnam mountain and an adjacent group of small lakes. A fall of 60 feet occurs at Kanes Falls. Wood creek is joined by Mettawee river a short distance above Whitehall. The drainage from Poultney and Castleton rivers enters the arm of Lake Champlain through which Wood creek flows below Whitehall.

WOOD CREEK BELOW DAM AT WHITEHALL, N. Y.

A gage has been maintained by this Department below the dam at Whitehall since January 22, 1905. This gage gives a record of the fluctuation in level of water in the arm of Lake Champlain into which Wood creek discharges.

The original gage, erected by Mr. D. B. La Du, was attached to the face of the Champlain Silk Mill on the right-hand side of the stream below the dam. A new gage attached to the face of the timber docking below the dam on the left-hand side of the stream is now used. The zero mark of each gage is at elevation 93.0, Barge canal datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Wood Creek below Dam at Whitehall N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	96.30	97.70	96.40	101.30	99.80	96.90	95.70	94.65	94.25	93.90	94.20	94.30
2	96.30	97.65	96.30	101.50	99.55	97.60	95.90	94.95	94.10	94.25	94.05	94.50
3	96.55	97.60	96.30	101.70	99.20	97.10	95.85	94.85	93.85	94.35	94.25	94.90
4	96.60	97.80	96.30	101.30	98.95	97.60	95.70	95.30	94.50	94.50	94.30	94.55
5	96.65	97.65	96.25	101.30	98.75	97.25	95.70	95.05	94.45	94.20	94.30	94.50
6	96.40	97.50	96.20	101.30	98.65	96.90	95.60	94.90	94.15	93.95	94.10	94.95
7	96.70	97.35	96.15	101.50	99.10	97.20	95.70	95.05	94.05	93.85	94.10	94.50
8	96.95	97.00	96.10	102.25	98.60	97.55	95.50	94.60	94.30	93.95	94.20	95.35
9	96.45	97.05	96.05	101.60	98.60	97.50	95.30	94.60	94.80	94.05	94.25	94.25
10	96.35	96.90	96.40	101.30	98.85	97.00	95.40	95.00	94.25	93.95	93.50	94.55
11	96.30	96.85	96.70	100.90	98.50	97.00	95.50	94.95	94.05	93.85	94.10	95.50
12	96.40	96.80	96.80	101.65	98.25	97.10	95.25	94.65	93.95	94.05	94.25	94.75
13	96.40	96.65	97.00	101.10	97.95	96.85	95.35	94.50	94.10	94.15	94.10	94.75
14	96.55	96.60	98.00	101.25	98.35	97.15	95.30	94.70	94.35	94.90	94.40	94.45
15	96.45	96.60	98.35	101.05	97.95	96.65	95.40	94.65	94.15	94.75	94.40	94.75
16	96.55	96.60	97.70	101.10	97.90	96.55	95.55	94.40	93.85	94.60	94.55	94.75
17	96.75	96.55	97.90	101.20	97.60	96.85	95.10	94.60	93.55	94.30	94.15	94.60
18	97.05	96.50	97.75	100.70	97.15	97.00	95.10	94.85	94.05	93.80	94.10	95.20
19	97.20	96.50	97.75	100.75	97.60	96.45	95.20	95.30	93.95	94.15	94.25	94.80
20	97.15	96.40	97.85	100.80	97.80	96.40	95.30	94.75	93.85	94.00	94.30	94.55
21	97.65	96.40	98.15	100.55	97.60	96.70	95.30	94.35	93.75	93.60	94.40	94.60
22	97.90	96.60	98.35	100.05	97.05	96.55	95.15	93.95	93.90	94.05	94.10	94.85
23	97.55	96.70	98.40	100.00	97.30	96.20	94.80	94.15	94.00	93.80	94.30	94.75
24	97.85	96.60	98.85	99.95	97.50	96.30	95.00	94.20	94.10	94.10	94.30	94.85
25	97.80	96.60	99.83	99.90	97.35	96.10	95.20	94.50	93.75	94.30	94.70	94.85
26	97.50	96.50	103.10	99.60	97.30	95.85	94.80	94.35	93.65	94.90	94.95	95.50
27	98.15	96.40	105.50	99.60	97.15	96.00	94.80	94.20	94.10	95.05	94.70	94.75
28	98.15	96.40	105.00	99.65	97.30	96.65	94.85	94.35	94.25	94.70	94.25	94.40
29	97.85	......	101.25	100.45	97.55	96.25	95.05	94.00	94.00	94.40	94.60	94.45
30	97.80	......	101.00	100.15	97.50	95.85	95.25	94.10	94.25	94.70	94.40	94.50
31	97.70	......	161.03	......	97.50	......	95.10	94.15	......	94.55	......	94.50

LAKE ONTARIO DRAINAGE.

GENERAL FEATURES.

In the northwestern part of the state of New York, between Niagara and St. Lawrence rivers, is an area aggregating about 12,400 square miles drained by streams which flow into Lake Ontario. The divide which controls this drainage is very irregular. Extending to the south and southeast from Fort Niagara, it passes around the head waters of the Genesee a short distance into Pennsylvania; thence reëntering New York it runs southward and eastward from the interior group of lakes, turns to the north, encircles the sources of Black river, turns again to the west, and descends to the lake. The country thus included is level or gently undulating in the counties bordering the lake, but farther south it becomes more rolling, and a series of ridges, gradually increasing in height, stretch down between Cayuga and Seneca, and their companion lakes, finally becoming merged with the elevated broken country forming the principal divide, the abrupt slopes of which attain altitudes of from 2,000 to 2,500 feet about the head waters of the Genesee.

The easterly, or Black river, lobe of the drainage basin receives the run-off from the southwestern slope of the Adirondack mountains — largely a rugged and forest-covered area — receiving heavy precipitation, especially in the winter.

Drift deposits are generally scattered over the section, and the soil is in part derived from that source and in part from the disintegration of native rocks.

The principal streams of the area are the Oswego, formed by the union of Seneca and Oneida rivers, which drain the chain of lakes in central New York, the Genesee, Salmon and Black rivers.

BLACK RIVER DRAINAGE BASIN.

BLACK RIVER.

DESCRIPTION.

Black river rises in the western part of Hamilton county N. Y., flows southwestward across Herkimer county into Oneida county, turns near Forestport and runs somewhat west of north through Lewis county to eastern Jefferson county, and then flows westward to Black river bay, at the eastern extremity of Lake Ontario. The upper part of the basin is very rugged and mountainous and contains a large number of lakes.

The regimen of the river is controlled by storage on its upper tributaries, including Beaver river at Beaver, a series of reservoirs at the head waters of Moose river, and additional reservoirs at Forestport and on the head waters of the main river.

Water is diverted from Black river through Forestport feeder to supply the Black river canal at Boonville. A portion of this diverted water flows northward from Boonville and enters Black river again at Lyons Falls; the remainder flows southward through the Black river canal and enters the Erie canal at Rome.

The results of gagings of this diversion may be found in the State Engineer's report for 1906, supplement, page 36, and also on pages 597–598 of the report for 1907.

BLACK RIVER NEAR FELTS MILLS, N. Y.

This station was established by Robert E. Horton, August 29, 1902, and has since been maintained by the U. S. Geological Survey in coöperation with this Department. It is located at the dam of the Lefebvre Paper Company, formerly owned by the Black River Traction Company, near the village of Felts Mills. The dam is nine miles upstream from Watertown and seven miles upstream from the old Huntingtonville gaging station on this stream. The drainage area is estimated at 1,851 square miles, or 37.5 square miles less than at Huntingtonville. The intervening area is mainly drained by two small streams, Townsend and Rutland Hollow creeks.

During the summer of 1910 the timber dam formerly used at this gaging station was replaced by a masonry dam located a few rods farther downstream. The new dam has a horizontal crest 3.75 feet in width. The downstream face slopes with a batter of about 1 on 1. The main crest, which is 300.45 feet in length, is substantially level. A discharge curve for this dam, using suitable coefficients, has been prepared.

The gage is attached vertically to a crib at the left-hand side of the stream above the mill. Correction is made to the gage readings for velocity of approach during high water. The discharge over the spillways has been calculated by means of the weir formula, using coëfficients derived from experiments of the United States Geological Survey for a dam of similar cross-section.

A wood pulp mill was constructed adjacent to this dam and has been in operation in 1907 and subsequent years. The mill contains four 72-inch and one 45-inch Smith-McCormick turbines. A record is kept of the hours run, and gate opening of each wheel, as well as of the head under which they operate.

Mean Daily Discharge, Second-feet, of Black River at Felts Mills, N. Y.

DAY.	Jan.*a*	Feb.*a*	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	3,308	15,234	3,267	*2,634	1,399	923	467	537	2,840	2,671
2	......	......	*1,996	13,907	3,187	3,290	1,309	923	923	1,115	*1,666	2,671
3	......	......	2,795	13,695	2,762	3,197	1,309	*527	923	537	2,431	2,589
4	......	......	2,657	14,346	*2,243	2,754	254	955	923	1,399	1,776	2,509
5	......	......	2,840	13,907	2,476	2,589	1,381	955	521	*1,491	2,509	2,671
6	......	......	2,528	*13,925	1,329	2,431	*720	955	923	1,719	2,509	2,754
7	......	......	2,528	13,695	1,962	2,137	1,320	923	*208	1,329	2,509	*3,170
8	......	......	2,528	12,635	1,836	*1,577	1,309	923	537	1,303	2,509	3,480
9	......	......	*2,243	10,719	1,836	2,268	1,320	923	537	923	*5,488	3,578
10	......	......	2,952	9,445	1,776	1,898	1,399	*527	730	1,320	5,687	3,578
11	......	......	3,868	8,446	*1,666	1,665	1,399	641	730	923	6,315	3,290
12	......	......	4,140	8,120	1,898	1,665	1,341	923	730	*......	6,575	2,431
13	......	......	4,828	*7,303	1,613	1,474	*1,322	923	665	1,341	6,188	2,671
14	......	......	8,042	7,862	1,367	1,474	1,816	923	*467	1,049	5,647	*2,429
15	......	......	14,346	7,646	1,474	*1,082	1,816	923	730	1,399	5,048	2,840
16	......	......	*18,590	6,779	1,435	1,341	1,506	923	537	1,116	*3,080	2,754
17	......	......	17,362	5,967	1,517	1,435	955	*653	665	923	3,578	2,509
18	......	......	15,989	5,143	*1,240	1,320	923	923	730	955	3,290	2,509
19	......	......	13,482	4,504	1,776	1,399	923	923	730	*859	2,926	2,589
20	......	......	11,166	*4,335	1,836	1,341	*720	923	537	955	4,369	1,836
21	......	......	10,454	4,605	1,962	1,435	923	923	*467	5,444	5,048	*1,666
22	......	......	10,641	3,914	1,776	*1,160	923	923	537	5,811	5,166	2,208
23	......	......	*14,640	3,830	1,776	1,517	923	923	553	6,061	*4,839	2,137
24	......	......	14,346	3,514	2,975	1,563	934	*467	896	5,244	4,932	1,719
25	......	......	14,786	3,348	*2,634	1,435	1,204	955	1,116	4,969	4,261	1,322
26	......	......	17,362	3,107	3,157	1,517	923	923	923	*4,095	3,538	2,280
27	......	......	27,260	*2,831	2,714	1,309	*254	923	923	4,301	3,065	1,653
28	......	......	32,166	3,107	2,631	1,341	1,013	923	*720	4,231	3,105	*1,666
29	......	......	31,176	3,107	4,193	*788	923	923	923	4,231	2,886	1,876
30	......	......	*24,373	3,267	4,857	1,309	923	923	923	3,422	*1,848	1,563
31	......	......	16,933	......	4,857	......	923	*527	......	3,197	......	1,816
Mean	......	......	11,365	7,739	2,323	1,743	1,107	856	706	2,329	3,854	2,433

a No record. * Sunday.

Monthly Discharge of Black River at Felts Mills, N. Y.

[Drainage area, 1,851 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
March	32,166	1,996	11,365	6.14	7.08
April	15,234	2,831	7,739	4.18	4.66
May	4,857	1,240	2,323	1.25	1.44
June	3,290	788	1,743	0.942	1.05
July	1,816	254	1,107	0.598	0.689
August	955	467	856	0.462	0.533
September	1,116	208	706	0.381	0.425
October	6,061	537	2,329	1.25	1.44
November	6,575	1,666	3,854	2.08	2.32
December	3,578	1,322	2,433	1.31	1.51

BLACK RIVER NEAR BOONVILLE, N. Y.

This gaging station is located at the highway bridge about two or three miles northeast of the village of Boonville. The drainage area at this point is 303 square miles.

The gage is of the chain-and-weight type and is fastened to the downstream side of the bridge. A staff gage is used to obtain readings during high water.

The channel of the stream at this place is rough and covered with boulders. During high stages discharge measurements are obtained from a cable stretched across the stream about one-half mile above the gage and at low stages by wading near the same place. During the winter the relation of gage height and discharge is affected by ice.

A portion of the flow of Black river is diverted above the gaging station through a feeder having its intake at the State dam at Forestport and delivering its flow to the summit level of the Black River canal at Boonville. A portion of this flow passes Northwood, supplying the Black River canal from Boonville to the head of slack water navigation at the foot of Lyon Falls. The remainder of this diversion flows into the Erie canal at Rome.

To determine the amount of water diverted around this station, measurements have been made in the Forestport feeder at a farm bridge near Sperry Hill one mile northeast of Boonville. Measurements of the amount that flows northward into the Black River canal are made at a farm bridge one-half mile north of Boonville. Measurements of the amount flowing southward are made at a farm bridge about three-quarters of a mile southeast of Boonville. The results of these measurements are published below.

This station is maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Mean Daily Gage Height, in Feet, of Black River near Boonville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	5.70	5.90	5.60	7.60	5.10	7.60	4.10	3.16	3.18	3.18	3.95	4.90
2	5.45	5.70	5.50	7.40	5.30	7.60	3.80	3.22	3.02	3.34	3.80	5.15
3	6.40	5.80	5.35	7.40	5.30	7.30	3.40	3.22	3.10	3.45	4.30	5.30
4	7.00	5.90	5.20	7.20	5.60	5.70	3.25	3.22	3.20	4.05	3.38	5.50
5	7.20	5.60	5.15	7.60	5.30	4.95	3.05	3.19	3.24	4.20	3.50	5.60
6	7.30	5.50	5.30	8.00	5.40	4.40	3.10	3.23	3.24	3.95	3.32	5.30
7	7.80	5.45	5.25	7.00	5.35	4.05	3.08	3.16	3.12	3.38	3.10	5.30
8	7.90	5.60	5.15	6.80	5.10	4.05	3.22	3.29	3.28	3.26	3.50	5.40
9	7.60	5.30	5.00	6.60	5.00	3.80	3.22	3.18	3.25	3.08	5.20	5.15
10	7.10	5.15	5.15	6.40	4.90	3.60	3.06	3.28	3.08	3.12	8.20	5.10
11	7.00	5.25	5.35	6.60	4.70	3.60	3.30	3.24	3.02	3.23	8.00	5.25
12	7.00	5.50	5.55	6.60	4.75	3.50	3.55	3.18	3.12	3.38	7.60	5.40
13	6.60	5.35	5.60	6.70	4.70	3.55	3.45	3.15	3.10	3.24	7.30	5.30
14	6.20	5.45	7.40	6.40	4.40	3.60	3.50	3.16	3.18	3.28	5.90	5.10
15	6.10	5.50	8.20	6.30	4.45	3.48	3.60	3.26	3.12	3.22	5.40	5.05
16	6.30	5.40	8.40	6.20	4.80	3.36	3.38	3.16	3.18	3.22	5.40	4.85
17	6.60	5.60	6.90	6.60	4.80	3.60	3.48	3.22	3.10	3.20	5.05	5.00
18	7.80	5.30	6.60	6.70	4.55	3.70	3.18	3.14	3.19	3.13	4.95	5.00
19	8.40	5.35	6.60	6.10	4.80	3.85	3.30	3.12	3.12	3.12	4.90	4.60
20	8.40	5.20	6.60	6.20	4.70	4.05	3.09	3.08	3.24	4.15	5.80	4.75
21	8.80	5.30	6.70	6.10	4.75	4.70	3.14	3.11	3.38	5.60	6.40	4.60
22	8.40	5.40	7.40	6.00	4.90	4.90	3.25	3.15	3.55	6.30	6.00	4.65
23	7.80	5.30	7.60	6.00	6.15	4.85	3.38	3.28	3.90	5.40	5.80	4.40
24	7.50	5.25	7.70	5.80	5.80	4.70	3.32	3.20	3.75	5.35	5.80	4.60
25	7.10	5.30	8.40	6.00	5.80	4.40	3.22	3.18	3.40	5.25	5.70	4.70
26	6.80	5.60	10.60	6.00	5.60	4.60	3.20	3.14	3.60	5.10	5.30	4.80
27	6.40	5.60	10.60	5.70	5.70	4.65	3.15	3.22	3.60	4.85	5.05	4.55
28	6.10	5.40	10.80	5.70	6.40	4.60	3.20	3.22	3.29	4.80	4.80	4.70
29	5.90	......	9.10	5.40	7.30	4.50	3.44	3.22	3.02	4.75	5.00	4.70
30	5.90	......	7.80	5.40	7.70	4.40	3.28	3.16	3.12	4.90	4.80	4.60
31	6.00	......	7.60	......	7.60	......	3.18	3.18	......	4.70	......	4.80

NOTE.— Gage heights not seriously affected by ice during first months of the year. Gage heights affected by ice, December 27 to 31.

Current-meter Discharge Measurements of Black River Canal (Flowing South) at Boonville, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Sub-mergence depth.	Total area.	Total width.	Com-puted dis-charge
1913.				*Sq. ft.*	*Feet.*	*Sec.-ft.*
June 9	G. J. Lyon	1.09	0.2 & 0.8	196	41	204
July 24	W. S. Easterly	1.26	0.2 & 0.8	192	40.5	194
July 25	W. S. Easterly	1.17	0.2 & 0.8	194	40.8	182
July 26	W. S. Easterly	1.43	0.2 & 0.8	189	40	187
July 28	W. S. Easterly	1.21	0.2 & 0.8	190	40	185
July 29	W. S. Easterly	1.22	0.2 & 0.8	189	40	194
July 30	W. S. Easterly	1.22	0.2 & 0.8	191	40	193
Aug. 1	W. S. Easterly	1.24	0.2 & 0.8	190	40	198
Aug. 2	W. S. Easterly	1.26	0.2 & 0.8	189	40	192
Aug. 4	W. S. Easterly	1.26	0.2 & 0.8	188	40	188
Aug. 5	W. S. Easterly	1.20	0.2 & 0.8	188	40	187
Aug. 6	W. S. Easterly	1.16	0.2 & 0.8	192	40	194
Aug. 7	W. S. Easterly	1.26	0.2 & 0.8	186	40	198
Aug. 8	W. S. Easterly	1.28	0.2 & 0.8	185	40	187
Aug. 9	W. S. Easterly	1.35	0.2 & 0.8	183	40	191
Aug. 10	W. S. Easterly	1.30	0.2 & 0.8	185	40	192
Aug. 17	W. S. Easterly	1.60	0.2 & 0.8	170	40	159
Aug. 18	W. S. Easterly	1.35	0.2 & 0.8	182	40	168
Aug. 19	W. S. Easterly	1.25	0.2 & 0.8	187	40	177
Sept. 1	C. S. De Golyer	1.40	0.2 & 0.8	179	40	160
Oct. 2	W. S. Easterly	1.20	0.2 & 0.8	196	40	200
Oct. 28	G. H. Canfield	1.17	0.2 & 0.8	191	41	222

Current-meter Discharge Measurements of Black River Canal (Flowing North) at Boonville, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.				*Sq. ft.*	*Feet.*	*Sec.-ft.*
June 11	G. J. Lyon	4.23	0.2 & 0.8	139	33.5	59.0
July 24	W. S. Easterly	4.75	0.2 & 0.8	126	33	42.1
July 25	W. S. Easterly	4.70	0.2 & 0.8	123	33	38.4
July 26	W. S. Easterly	4.77	0.2 & 0.8	122	33	33.8
July 28	W. S. Easterly	4.62	0.2 & 0.8	123	32	39.8
July 30	W. S. Easterly	4.58	0.2 & 0.8	128	33	38.6
Aug. 1	W. S. Easterly	4.90	0.2 & 0.8	117	32	29.9
Aug. 2	W. S. Easterly	4.82	0.2 & 0.8	120	32	27.6
Aug. 4	W. S. Easterly	4.75	0.2 & 0.8	119	32	25.9
Aug. 6	W. S. Easterly	4.82	0.2 & 0.8	118	32	25.1
Aug. 7	W. S. Easterly	6.00	0.2 & 0.8	80.8	30	11.8
Aug. 8	W. S. Easterly	4.75	0.2 & 0.8	121	32	29.6
Aug. 9	W. S. Easterly	4.84	0.2 & 0.8	117	33	25.0
Aug. 10	W. S. Easterly	4.86	0.2 & 0.8	118	32	24.8
Aug. 17	W. S. Easterly	4.44	0.2 & 0.8	133	33	46.8
Aug. 18	W. S. Easterly	4.65	0.2 & 0.8	123	32	39.0
Sept. 1	C. S. De Golyer	4.60	0.2 & 0.8	121	32	39.5
Oct. 2	W. S. Easterly	4.25	0.2 & 0.8	141	33	50.6
Oct. 28	G. H. Canfield	1.94	0.2 & 0.8	100	35.5	14.8

Current-meter Measurements of Forestport Feeder at Boonville, N. Y.

DATE.	Hydrographer.	Mean gage reading.*a*	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.				*Sq. ft.*	*Feet.*	*Sec.-ft.*
June 9	G. J. Lyon	0.60	0.2 & 0.8	192	39	289
July 24	W. S. Easterly	0.95	0.2 & 0.8	158	35	259
July 25	W. S. Easterly	1.18	0.2 & 0.8	154	36	223
July 26	W. S. Easterly	1.16	0.2 & 0.8	158	36	252
July 28	W. S. Easterly	0.98	0.2 & 0.8	160	36	266
July 29	W. S. Easterly	1.06	0.2 & 0.8	156	36	246
July 30	W. S. Easterly	1.04	0.2 & 0.8	158	35	255
July 31	W. S. Easterly	1.05	0.2 & 0.8	157	35	242
Aug. 1	W. S. Easterly	1.04	0.2 & 0.8	158	35	251
Aug. 2	W. S. Easterly	1.02	0.2 & 0.8	159	35	244
Aug. 4	W. S. Easterly	1.02	0.2 & 0.8	158	35	245
Aug. 5	W. S. Easterly	0.98	0.2 & 0.8	161	35	246
Aug. 6	W. S. Easterly	0.92	0.2 & 0.8	159	35	244
Aug. 7	W. S. Easterly	0.94	0.2 & 0.8	161	35	258
Aug. 8	W. S. Easterly	0.97	0.2 & 0.8	157	35	241
Aug. 9	W. S. Easterly	1.03	0.2 & 0.8	156	35	234
Aug. 10	W. S. Easterly	0.96	0.2 & 0.8	159	35	244
Aug. 17	W. S. Easterly	1.14	0.2 & 0.8	153	35	247
Aug. 18	W. S. Easterly	1.05	0.2 & 0.8	156	35	232
Aug. 19	W. S. Easterly	0.95	0.2 & 0.8	160	35	239
Sept. 1	C. S. De Golyer	1.06	0.2 & 0.8	150	35	222
Oct. 2	W. S. Easterly	0.88	0.2 & 0.8	167	35	262
Oct. 28	G. H. Canfield	1.05	0.2 & 0.8	152	35	262

a Distance from reference point down to water-surface.

Current-meter Discharge Measurements of Black River near Boonville, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Mar. 12	R. S. Barnes	5.44	5	0.2 & 0.8	275	125	636
Mar. 13	R. S. Barnes	5.65	5	0.2 & 0.8	298	86	622
April 15	R. S. Barnes	6.10	5	0.2 & 0.8	377	112	999
July 29 *a*	W. S. Easterly	3.47	5	0.2 & 0.8	148	80	70.5
Aug. 5 *a*	W. S. Easterly	3.21	5	0.2 & 0.8	193	108	40.6
Aug. 19 *a*	W. S. Easterly	3.11	5	0.2 & 0.8	196	109	33.0

a Made by wading about 200 feet above gage.

Mean Daily Discharge, Second-feet, of Black River near Boonville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	735	855	680	2,380	450	2,380	164	39	40	40	136	370
2.....	605	735	630	2,160	535	2,380	111	44	28	55	111	470
3.....	1,210	795	558	2,160	535	2,050	61	44	34	66	205	535
4.....	1,740	855	490	1,940	680	735	46	44	42	154	59	630
5.....	1,940	680	470	2,380	535	390	30	41	46	184	72	680
6....	2,050	630	535	2,860	580	227	34	45	46	136	53	535
7.....	2,620	605	512	1,740	558	154	33	39	36	59	34	535
8.....	2,740	680	470	1,540	450	154	44	50	49	47	72	580
9.....	2,380	535	410	1,370	410	111	44	40	46	33	490	470
10.....	1,840	470	470	1,210	370	84	31	49	33	36	3,110	450
11.....	1,740	512	558	1,370	305	84	51	46	28	45	2,860	512
12.....	1,740	630	655	1,370	320	72	78	40	36	59	2,380	580
13.....	1,370	558	680	1,460	305	78	66	38	34	46	2,050	535
14.....	1,060	605	2,160	1,210	227	84	72	39	40	49	855	450
15.....	990	630	3,110	1,140	238	70	84	47	36	44	580	430
16.....	1,140	580	3,360	1,060	335	57	59	39	40	44	580	352
17.....	1,370	680	1,640	1,370	335	84	70	44	34	42	430	410
18.....	2,620	535	1,370	1,460	262	97	40	37	41	36	390	410
19.....	3,360	558	1,370	990	335	119	51	36	36	36	370	275
20.....	3,360	490	1,370	1,060	305	154	33	33	46	174	795	320
21.....	3,880	535	1,460	990	320	305	37	35	59	680	1,210	275
22.....	3,360	580	2,160	920	370	370	46	38	78	1,140	920	290
23.....	2,620	535	2,380	920	1,020	352	59	49	127	580	795	227
24.....	2,270	512	2,500	795	795	305	53	42	104	558	795	275
25.....	1,840	535	3,360	920	795	227	44	40	61	512	735	305
26.....	1,540	680	6,390	920	680	275	42	37	84	450	535	335
27.....	1,210	680	6,390	735	735	290	38	44	84	352	430	......
28.....	990	580	6,680	735	1,210	275	42	44	50	335	335	......
29.....	855	......	4,280	580	2,050	250	65	44	28	320	410	......
30.....	855	......	2,620	580	2,500	227	49	39	36	370	335	......
31.....	920	......	2,380	......	2,380	......	40	40	......	305	......	......
Mean...	1,840	616	2,000	1,340	675	415	55.4	41.5	49.4	225	738	403

NOTE.— Open-water rating used for all discharges given. Daily discharge from about February 8 to March 8 may be slightly large for this reason.

Monthly Discharge of Black River near Boonville, N. Y.
[Drainage area, 303 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	3,880	605	1,840	6.07	7.00
February	855	470	616	2.03	2.11
March	6,680	410	2,000	6.60	7.61
April	2,860	580	1,340	4.42	4.93
May	2,500	227	675	2.23	2.57
June	2,380	57	415	1.37	1.53
July	164	30	55.4	0.183	0.21
August	50	33	41.5	0.137	0.16
September	127	28	49.4	0.163	0.18
October	1,140	33	225	0.743	0.86
November	3,110	34	738	2.44	2.72
December	680	227	403	1.33	1.53

NOTE.— Estimates do not indicate the natural flow of the stream at this point, as it is regulated at the Forestport reservoir and certain amounts of water are diverted out of the drainage area and around the station.

MOOSE RIVER DRAINAGE BASIN.

DESCRIPTION.

Moose river is tributary to Black river at Lyons Falls, N. Y., joining Black river just above the head of the fall of about 50 feet. The drainage of Moose river lies chiefly in Hamilton and Herkimer counties and comprises a wild, rugged and little inhabited region largely forest covered, but containing also large tracts of cut and burned-over lands, numerous and extensive swamps and lakes. The stream above the gaging station near McKeever comprises three main branches. The south branch is chiefly broad and sluggish. The area tributary to this branch contains extensive swamps and marshes and but few lakes, the most important lakes being the Limekill and Little Moose lakes. The middle branch is substantially a continuous chain of lakes, known as the Fulton Chain, extending from Old Forge a distance of about 15 miles upstream through eight different lakes. The outflow from Fulton Chain is artificially controlled by a State dam at Old Forge. The first to fourth lakes, inclusive, are at elevation 1,706 feet above tide. There is also a dam at the outlet of the sixth lake. Sixth, seventh and eighth lakes are at elevations 1,785 to 1,788 feet above tide. The north branch of the stream is made up of a large number of scattered lakes, the most important one being Big Moose lake. The lower course of the north branch is sluggish and tortuous. The drainage basin above McKeever is nearly all shown on the Big Moose, Raquette lakes, Old Forge and West Canada lakes quadrangles of the U. S. Geological Survey topographic maps.

MOOSE RIVER AT MOOSE RIVER, N. Y.

This gaging station is located in the village of Moose River about three miles downstream from McKeever station on the Adirondack division of the New York Central and Hudson River railroad, five miles below the mouth of the south branch of the Moose river and about 20 miles above the junction of the Black and Moose rivers at Lyon Falls. The drainage area at this station is 370 square miles.

The gage is of the staff type in two sections. The channel is composed of cobbles and boulders and is of a fairly permanent character.

Current-meter discharge measurements are made from a cable across the stream a short distance below the gage. A dam at McKeever, used for power and for the regulation of the flow for log-driving, affects the flow somewhat. The flow is materially affected by ice during the winter months.

This station is maintained by the United States Geological Survey in coöperation with the Department of the State Engineer and Surveyor.

Mean Daily Gage Height, in Feet, of Moose River at Mocse River, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	7.60	6.70	6.80	9.90	6.60	8.00	6.10	5.55	5.18	5.80	6.80	7.20
2.....	7.80	6.90	6.70	9.70	6.70	8.20	6.00	5.44	5.34	5.95	6.00	7.00
3.....	8.10	7.00	6.80	9.80	6.60	8.30	6.15	5.55	5.46	6.50	6.70	6.80
4.....	8.40	7.20	6.60	9.80	6.50	7.80	6.10	5.44	5.41	6.80	6.70	6.40
5.....	8.20	7.60	6.80	10.40	6.45	7.50	6.20	5.55	5.50	6.30	7.10	6.50
6.....	8.20	7.50	6.60	10.40	6.35	7.00	5.90	5.65	5.41	6.10	7.00	6.40
7.....	8.80	7.20	6.80	10.10	6.46	6.70	5.60	5.80	5.12	6.10	6.80	5.90
8.....	9.80	6.90	6.90	9.50	6.35	6.50	5.55	5.09	5.20	6.00	6.70	6.80
9.....	9.60	6.90	7.00	8.70	6.40	6.50	5.45	6.15	5.11	5.85	7.20	7.80
10.....	9.20	6.80	7.30	8.00	6.40	6.45	5.55	5.90	5.20	5.60	11.20	7.20
11.....	8.70	6.80	7.80	7.90	6.20	6.50	5.85	5.60	5.25	5.50	9.40	6.80
12.....	8.60	6.70	8.10	7.90	6.25	6.25	6.10	5.60	5.31	5.18	8.40	6.80
13.....	8.60	6.80	8.60	8.20	6.10	6.25	6.00	5.55	5.29	5.44	8.40	7.00
14.....	8.60	6.90	9.10	8.20	5.90	6.35	6.10	5.55	5.21	5.80	8.10	6.80
15.....	8.10	6.90	10.40	8.30	5.70	6.25	5.95	5.42	5.28	6.00	8.20	6.80
16.....	7.80	7.00	10.70	7.80	5.60	6.20	5.80	5.60	5.30	6.20	8.10	6.50
17.....	8.60	7.00	10.20	7.70	5.50	6.20	5.95	5.12	5.36	6.10	7.70	6.60
18.....	9.60	6.80	10.00	7.70	5.40	6.15	5.65	5.60	5.39	6.30	7.50	6.80
19.....	10.40	6.80	9.80	7.90	5.90	6.10	5.55	5.41	5.65	5.80	7.60	6.60
20.....	9.80	6.80	9.60	7.70	6.30	6.15	5.44	5.11	5.55	6.60	8.20	6.60
21.....	10.80	6.80	9.80	7.50	6.50	6.05	4.94	5.30	5.39	8.80	9.20	5.70
22.....	10.40	6.60	10.00	7.20	6.60	5.95	5.19	5.48	5.55	8.80	8.60	6.10
23.....	9.90	6.99	10.20	7.20	6.70	6.00	4.94	5.41	5.42	8.10	8.90	5.85
24.....	9.70	7.20	11.30	7.10	6.90	5.90	5.44	5.06	5.50	7.80	8.30	5.25
25.....	9.20	7.60	12.20	7.20	7.00	5.70	4.94	5.21	5.60	7.40	8.00	5.29
26.....	8.80	7.80	14.20	7.20	7.00	5.50	4.94	5.34	5.70	7.70	7.80	5.60
27.....	8.60	7.30	15.50	7.10	7.10	6.40	4.94	5.60	5.80	8.40	7.80	6.25
28.....	7.60	7.00	13.80	6.80	8.00	6.50	5.49	5.44	5.60	8.10	8.00	6.05
29.....	7.20	......	12.80	6.60	9.30	6.40	5.55	5.31	5.80	7.80	7.70	6.30
30.....	7.10	......	11.80	6.50	8.80	6.30	5.65	5.19	5.60	7.50	7.60	6.60
31.....	6.80	......	10.20	......	8.40	......	5.55	5.14	......	7.00	......	6.35

NOTE.— Gage heights not seriously affected by ice during the winter of 1912–13. Gage datum dropped 5.00 ft. on January 1, 1913.

Current-meter Discharge Measurements of Moose River at Moose River, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913				*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Aug. 15 *a*	C. S. De Golyer...	5 54	877	5	0.2 & 0.8	246	196	0.62	153
Aug. 15 *b*	W. S. Easterly....	5.46	896	5	0.2 & 0 8	230	193	0 63	145
Oct. 27	G. H. Canfield....	8.37	877	10	0.2 & 0.8	944	226	1.46	1,380
Oct. 27	G. H. Canfield....	8.34	877	5	0.2 & 0.8	949	226	1.43	1,360

a Made by wading 100 feet above gage. *b* Made by wading 300 feet above gage.

Mean Daily Discharge, Second-feet, of Moose River at Moose River, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	910	510	545	2,760	476	1,150	316	164	79	229	545	710
2.....	1,020	585	510	2,570	510	1,290	286	136	112	272	286	625
3.....	1,220	625	545	2,660	476	1,360	331	164	141	442	510	545
4.....	1,430	710	476	2,660	442	1,020	316	136	128	545	510	409
5.....	1,290	910	545	3,280	426	855	346	164	151	377	665	442
6.....	1,290	855	476	3,280	393	625	257	189	128	316	625	409
7.....	1,760	710	545	2,960	409	510	176	229	69	316	545	257
8.....	2,660	585	585	2,390	393	442	164	64	83	286	510	545
9.....	2,480	585	625	1,670	409	442	138	331	67	243	710	1,020
10.....	2,120	545	755	1,150	409	426	164	257	83	176	4,230	710
11.....	1,670	545	1,020	1,090	346	442	243	176	93	151	2,300	545
12.....	1,590	510	1,220	1,090	362	362	316	176	105	79	1,430	545
13.....	1,590	545	1,590	1,290	316	362	286	164	101	136	1,430	625
14.....	1,590	585	2,030	1,290	257	393	316	164	85	229	1,220	545
15.....	1,220	585	3,280	1,360	202	362	272	131	99	286	1,290	545
16.....	1,020	625	3,620	1,020	176	346	229	176	103	346	1,220	442
17.....	1,590	625	3,060	965	151	346	272	69	117	316	965	476
18.....	2,480	545	2,860	965	126	331	189	176	124	377	855	545
19.....	3,280	545	2,660	1,080	257	316	164	128	189	229	910	476
20.....	2,660	545	2,480	965	377	331	136	67	164	476	1,290	476
21.....	3,740	545	2,660	855	442	301	42	103	124	1,760	2,120	202
22.....	3,280	476	2,860	710	476	272	81	146	164	1,760	1,590	316
23.....	2,760	585	3,060	710	510	286	42	136	131	1,220	1,850	243
24.....	2,570	710	4,360	665	585	257	136	59	151	1,020	1,360	93
25.....	2,120	910	5,630	710	625	202	42	85	176	805	1,150	101
26.....	1,760	1,020	9,400	710	625	151	42	112	202	965	1,020	176
27.....	1,150	755	12,900	665	665	409	42	176	229	1,430	1,020	362
28.....	910	625	8,800	545	1,150	442	148	136	176	1,220	1,150	301
29.....	710	......	6,680	476	2,210	409	164	105	229	1,020	965	377
30.....	665	......	5,030	442	1,760	377	189	81	176	855	910	476
31.....	545	......	3,060	......	1,430	......	164	72	......	625	......	393

NOTE.— Open water rating used for whole year. Daily discharge may be slightly large for a short period in February.

Monthly Discharge of Moose River at Moose River, N. Y.
[Drainage area, 370 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	3,740	545	1,780	4.81	5.54
February	1,020	476	639	1.73	1.80
March	12,900	476	3,030	8.19	9.44
April	3,280	442	1,430	3.86	4.31
May	2,210	126	561	1.51	1.74
June	1,360	151	494	1.32	1.47
July	331	42	194	0.524	0 60
August	331	59	144	0.39	0.45
September	229	67	134	0.362	0.40
October	1,760	79	597	1.61	1.86
November	4,230	286	1,170	3.16	3.53
December	1,020	93	449	1.21	1.40

MIDDLE BRANCH OF MOOSE RIVER AT OLD FORGE, N. Y.

This gaging station is located about 300 feet below the highway bridge at Old Forge and about 400 feet below the dam at that place. The drainage area at this station is 51.5 square miles.

A vertical staff gage is spiked to a birch tree on the left-hand downstream bank about 300 feet below the highway bridge in this vicinity.

The channel is fairly straight from the dam to about 200 feet below the gage, where the river turns abruptly to the right and flows over a rocky reef.

Current-meter discharge measurements are made at this station by wading during low and medium stages, and from the highway bridge during high stages. The flow at this station is controlled by the dam previously mentioned.

Mean Daily Gage Height, in Feet, of Middle Branch, Moose River, at Old Forge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	2.40	1.99	1.92	4.80	1.85	1.85	1.15	1.95	1.84	1.55	2.22	2.05
2.....	1.86	1.98	1.92	4.60	1.85	1.85	1.15	1.95	1.85	1.55	2.22	2.05
3.....	1.35	1.98	1.02	4.30	1.85	1.85	1.15	1.95	1.85	1.55	2.20	1.40
4.....	1.35	1.98	1.92	4.10	1.85	1.85	1.15	1.95	1.85	1.55	2.20	0.75
5.....	1.35	1.98	1.92	4.10	1.85	1.85	1.15	1.95	1.85	1.55	2.20	0.75
6.....	1.35	1.98	1.98	4.10	1.85	1.85	1.15	1.95	1.85	1.55	2.20	0.75
7.....	1.35	1.95	1.92	4.00	1.85	2.00	1.15	1.95	1.85	1.55	2.32	0.75
8.....	1.00	1.92	1.92	3.40	1.85	2.15	1.15	1.95	1.85	1.55	2.45	0.75
9.....	1.00	1.90	1.92	2.90	1.58	2.00	1.15	1.95	1.85	1.55	2.45	0.75
10.....	1.00	1.90	1.92	2.85	1.30	1.75	1.15	1.95	1.85	1.55	2.45	0.75
11.....	1.00	1.90	1.92	2.95	1.30	1.38	1.15	1.95	1.85	1.90	2.45	0.70
12.....	1.00	1.90	1.92	3.00	1.30	1.10	1.15	1.95	1.85	2.25	2.45	0.70
13.....	1.00	1.90	1.90	3.00	1.30	1.10	1.15	1.95	1.85	2.25	2.45	0.70
14.....	1.00	1.90	1.98	2.90	1.30	1.10	1.15	1.95	1.85	2.25	2.66	0.70
15.....	1.00	1.90	2.20	2.75	1.30	1.10	1.15	1.95	1.88	2.25	2.86	0.70
16.....	1.00	1.90	3.00	2.60	1.30	1.48	1.15	1.95	1.92	2.25	2.81	0.70
17.....	1.00	1.90	3.00	2.35	1.48	1.48	1.15	1.95	1.92	2.25	2.76	0.70
18.....	1.00	1.88	3.20	2.00	1.65	1.10	1.15	1.95	1.92	2.25	2.71	0.70
19.....	1.20	1.88	3.30	1.85	1.75	1.10	1.15	1.95	1.92	2.25	2.70	0.70
20.....	1.40	1.88	3.20	1.85	1.85	1.10	1.15	1.95	1.92	2.25	2.65	0.70
21.....	1.59	1.88	3.20	2.00	1.85	1.10	1.15	1.95	1.92	2.25	2.72	0.70
22.....	1.71	1.89	3.40	2.20	2.20	1.10	1.15	1.95	1.92	2.25	2.70	0.70
23.....	1.78	1.92	3.50	2.30	2.55	1.10	1.15	1.95	1.92	2.25	2.65	0.70
24.....	1.85	1.92	3.60	2.45	2.40	1.10	1.15	1.95	1.92	2.25	2.65	0.70
25.....	1.88	1.92	4.00	2.45	2.15	1.10	1.15	1.95	......	2.25	2.61	0.70
26.....	1.91	1.92	4.80	2.30	1.92	1.10	1.15	1.95	1.55	2.22	2.60	0.70
27.....	1.95	1.92	5.50	2.00	1.85	1.10	1.55	1.85	1.55	2.24	2.58	0.70
28.....	1.95	1.92	6.30	1.85	2.30	1.75	1.95	1.85	1.55	2.22	2.10	0.70
29.....	1.95	......	6.20	2.00	2.75	1.78	1.95	1.85	1.55	2.22	2.92	0.70
30.....	1.95	......	5.50	2.00	2.45	1.15	1.95	1.85	1.55	2.22	2.12	0.70
31.....	1.95	......	5.00	......	2.00	......	1.92	1.82	......	2.22	......	0.70

NOTE.—Gage heights were affected by back water from North Branch of Moose River, March 26 to April 7, 1913. Gage heights were affected by brush lodged on the control from April 18 to September 25, 1913. The control was cleared of all brush and logs September 25, 1913.

Current-meter Discharge Measurements of Middle Branch, Moose River, at Old Forge, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Aug. 15 *a*	C. S. De Golyer	1.92	5.0	0.2 & 0.8	112	60	0.54	60.3
Aug. 16 *b*	C. S. De Golyer	1.92	2.5	0.2 & 0.8	87.9	66	0.72	63.0
Sept. 23 *b*	W. S. Easterly	1.92	2.5	0.2,0.8 & 0.6	87.8	64	0.70	61.7
Sept. 23 *b*	W. S. Easterly	1.15	2.5	0.2,0.8 & 0.6	39.1	57	0.45	17.6
Sept. 24 *b*	W. S. Easterly	1.56	2.5	0.2 & 0.8	64.3	62	0.60	38.5
Sept. 24 *b*	W. S. Easterly	2.32	2.5	0.2 & 0.8	116	65	1.00	116
Sept. 24 *b*	W. S. Easterly	2.72	2.5	0.2 & 0.8	141	66	1.33	187
Sept. 24 *b*	O. W. Hartwell	1.70	2.5	0.2 & 0.8	74.7	63	0.64	47.9
Sept. 25 *b*	W. S. Easterly	1.48	2.5	0.2 & 0.8	61.6	62.5	0.91	56.0
Sept. 25 *b*	W. S. Easterly	0.99	2.5	0.6	32.3	56	0.67	21.6
Sept. 26 *b*	W. S. Easterly	1.70	2.5	0.2 & 0.8	75.6	63	1.00	75.5
Sept. 26 *b*	W. S. Easterly	2.12	2.5	0.2 & 0.8	102	63.5	1.27	130
Sept. 26 *b*	W. S. Easterly	1.86	2.5	0.2 & 0.8	85	63.5	1.10	93.5
Sept. 26 *b*	W. S. Easterly	2.54	2.5	0.2 & 0.8	131	65.5	1.52	199

a Measurement made by wading 500 feet above gage. *b* Measurement made by wading 25 feet above gage.

Mean Daily Discharge, Second-feet, of Middle Branch, Moose River, at Old Forge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	143	83	74	641	58	58	18	67	57	60	145	120
2	68	82	74	617	58	58	18	67	58	60	145	120
3	24	82	74	583	58	58	18	67	58	60	142	48
4	24	82	74	562	58	58	18	67	58	60	142	12
5	24	82	74	549	58	58	18	67	58	60	142	12
6	24	82	82	539	58	58	18	67	58	60	142	12
7	24	78	74	529	58	72	18	67	58	60	161	12
8	10	74	74	328	58	91	18	67	58	60	184	12
9	10	72	74	232	40	72	18	67	58	60	184	12
10	10	72	74	223	25	50	18	67	58	60	184	12
11	10	72	74	242	25	29	18	67	58	99	184	11
12	10	72	74	251	25	16	18	67	58	150	184	11
13	10	72	72	251	25	16	18	67	58	150	184	11
14	10	72	82	232	25	16	18	67	58	150	222	11
15	10	72	112	184	25	16	18	67	60	150	265	11
16	10	72	251	177	25	34	18	67	64	150	253	11
17	10	72	251	135	34	34	18	67	64	150	243	11
18	10	70	289	72	44	16	18	67	64	150	232	11
19	17	70	308	58	50	16	18	67	64	150	230	11
20	27	70	289	58	58	16	18	67	64	150	220	11
21	41	70	289	72	58	16	18	67	64	150	234	11
22	52	71	328	98	98	16	18	67	64	150	230	11
23	59	74	348	113	155	16	18	67	64	150	220	11
24	66	74	368	138	129	16	18	67	64	150	220	11
25	70	74	451	138	91	16	18	67	62	150	212	11
26	73	74	517	113	64	16	18	67	60	145	210	11
27	78	74	600	72	58	16	38	58	60	148	206	11
28	78	74	760	58	113	50	67	58	60	145	127	11
29	78	......	746	72	194	53	67	58	60	145	279	11
30	78	......	707	72	138	18	67	58	60	145	130	11
31	78	......	665	......	72	......	64	56	......	145	......	11
Mean	39.9	74.6	269	247	65.6	35.8	24.9	65.5	60.3	118	195	19.5

NOTE.— Daily discharge, March 26 to April 7, inclusive, computed from gage openings and lake elevations at Old Forge dam. Daily discharge, April 18 to September 25, determined from a rating curve which is well defined by six measurements made with the brush lodged on the control. After the control was cleared, six measurements were made, defining a new curve, which is applicable for the remainder of the year. This final rating does not coincide with the rating used before April 17, 1913.

Monthly Discharge of Middle Branch, Moose River, at Old Forge, N. Y.
[Drainage area, 51.5 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	143	10	39.9	0.775	0.89
February	83	70	74.6	1.45	1.51
March	760	72	26.9	5.22	6.02
April	641	58	24.7	4.80	5.36
May	194	25	65.6	1.27	1.46
June	91	16	35.8	0.695	0.78
July	67	18	24.9	0.483	0.56
August	67	56	65.5	1.27	1.46
September	64	57	60.3	1.17	1.30
October	150	60	11.8	2.29	2.64
November	279	127	19.5	3.79	4.23
December	120	11	19.5	0.379	0.44

NOTE.— Estimates indicate the flow as regulated by the Old Forge dam at the outlet of Fulton Chain lakes.

SALMON RIVER DRAINAGE BASIN.

DESCRIPTION.

Salmon river rises in the southwestern part of Lewis county and flows southward and then northward, entering Lake Ontario near Port Ontario. Its drainage area comprises about 285 square miles. The topography is generally rolling in character and the soil is sandy, rock lying near the surface in the upper part of the basin, where there are extensive tracts of virgin forest.

The mean annual precipitation is about thirty-five inches, and during the winter there is usually a heavy fall of snow, which often accumulates in the forest areas to a depth of several feet. The gradual melting of this snow, in the spring, tends to prevent high freshets.

The basin affords several opportunities for storage. At High Falls there is an undeveloped fall of about 110 feet occurring in a very short distance. Considering its size, this river has rather important power possibilities.

SALMON RIVER NEAR PULASKI, N. Y.

This station is located on the first highway bridge above the village of Pulaski and was established by Robert E. Horton for the U. S. Geological Survey, in coöperation with this Department, September 5, 1900. A vertical staff gage was attached to the upstream end of the center pier, with its zero 11.59 feet below the bench-mark, which is the top of the cap stone of the center pier.

This gage was removed by ice during the winter of 1901–1902 and then replaced July 23, 1902, by a chain gage, having its zero 12.79 feet below the original bench-mark. The station was discontinued June 30, 1907, reëstablished August 16, 1908, and discontinued December 6, 1908. It was maintained during these periods of coöperation with this Department.

On July 14, 1910, it was reëstablished by the Survey in coöperation with the State Water Supply Commission of New York, for the purpose of obtaining general statistical data regarding the flow of Salmon river. The gage datum has remained permanent since July 23, 1902. Discharge measurements are made from the bridge or by wading.

The station can be reached by a short drive from either Pulaski or Richland. Conditions are poor for records during the winter when the channel usually becomes clogged by ice. The open channel rating is fairly good.

Information regarding this station is contained in the reports of this Department and in the annual reports of the U. S. Geological Survey.

Mean Daily Gage Height, in Feet, of Salmon River near Pulaski, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	3.90	3.70	......	5.90	3.25	3.20	2.50	2.35	2.35	2.35	3.30	3.25
2	3.60	3.45	......	4.80	3.15	3.50	2.50	2.32	2.30	2.48	3.20	3.20
3	3.90	3.50	......	4.60	3.10	3.35	2.48	2.30	2.30	2.70	3.10	3.30
4	4.50	3.60	......	5.30	3.00	3.20	2.48	2.32	2.30	2.75	3.10	3.40
5	4.60	3.35	......	6.20	3.00	3.00	2.45	2.35	2.30	2.65	3.40	3.70
6	4.70	3.30	......	5.40	2.92	2.95	2.45	2.30	2.28	2.52	3.25	3.50
7	5.70	......	......	4.60	2.90	3.00	2.42	2.30	2.25	2.48	3.15	3.45
8	5.60	......	......	4.10	2.85	3.65	2.40	2.30	2.30	2.45	3.00	4.50
9	5.00	......	......	4.00	2.82	3.30	2.48	2.30	2.25	2.40	3.10	3.90
10	4.60	......	......	3.85	2.80	3.10	2.85	2.38	2.25	2.40	4.30	3.90
11	4.70	......	......	4.50	2.82	2.98	3.15	2.42	2.25	2.38	4.00	3.60
12	5.00	......	......	5.30	2.80	2.88	3.00	2.38	2.25	2.45	3.60	3.40
13	4.85	......	......	4.90	2.80	2.80	3.20	2.35	2.25	2.70	3.40	3.50
14	4.50	......	5.80	4.60	2.80	2.80	3.00	2.30	2.25	2.60	3.80	3.45
15	4.20	......	6.50	4.60	2.80	2.70	2.95	2.30	2.25	2.60	3.90	3.45
16	4.15	......	6.50	4.40	2.80	2.70	2.62	2.30	2.25	2.60	3.55	3.45
17	4.80	......	5.30	4.25	2.80	2.68	2.58	2.30	2.28	2.60	3.35	3.40
18	6.60	......	4.80	4.00	2.80	2.60	2.52	2.30	2.32	2.58	3.30	3.40
19	6.50	......	4.90	3.90	2.95	2.60	2.50	2.25	2.42	2.60	3.25	3.20
20	5.60	......	5.00	3.85	2.85	2.62	2.45	2.25	2.38	3.70	5.00	3.20
21	6.20	......	6.30	3.65	2.80	2.65	2.48	2.25	2.48	4.90	5.00	3.25
22	5.60	......	7.00	3.50	3.30	2.65	2.40	2.30	3.25	4.60	4.20	3.20
23	5.40	......	5.40	3.50	4.40	2.58	2.40	2.50	3.00	3.90	3.80	3.10
24	5.20	......	5.50	3.40	3.85	2.50	2.40	2.52	2.75	3.90	3.80	3.30
25	4.70	......	6.80	3.40	3.65	2.55	2.50	2.48	2.68	4.80	3.70	3.25
26	4.40	......	7.30	3.30	3.30	2.48	2.48	2.40	2.50	4.60	3.50	3.25
27	4.30	......	7.40	3.30	3.20	2.62	2.40	2.40	2.50	4.20	3.50	2.95
28	4.00	......	7.00	3.25	3.90	2.62	2.40	2.40	......	3.70	3.40	2.92
29	3.70	......	5.50	3.45	4.50	2.60	2.38	2.40	2.35	3.60	3.30	3.00
30	3.80	......	4.80	3.40	3.80	2.52	2.38	2.42	2.38	3.60	3.30	3.05
31	3.80	......	5.00	......	3.50	......	2.35	2.40	......	3.45	......	3.00

NOTE.— Gage heights affected by ice, February 7 to March 13, inclusive.

Current-meter Discharge Measurements of Salmon River near Pulaski, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
May 29	C. S. De Golyer	4.38	5	0.2 & 0.8	547	179	3.11	1,700
Nov. 3 *a*	G. H. Canfield	3.10	5	0.2 & 0.8	283	171	1.38	392

a Measurement made by wading under bridge.

Mean Daily Discharge, Second-feet, of Salmon River near Pulaski, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	1,020	845	......	4,250	500	465	118	79	79	79	535	500
2	760	642	......	2,090	432	680	118	72	68	112	465	465
3	1,020	680	......	1,800	400	570	112	68	68	191	400	535
4	1,680	760	......	2,940	340	465	112	72	68	213	400	605
5	1,800	570	......	5,080	340	340	104	79	68	172	605	845
6	1,940	535	......	3,140	296	312	104	68	65	125	500	680
7	3,770	......	......	1,800	285	340	96	68	60	112	432	642
8	3,550	......	......	1,220	260	802	90	68	68	104	340	1,680
9	2,400	......	......	1,120	245	535	112	68	60	90	400	1,020
10	1,800	......	......	978	235	400	260	86	60	90	1,400	1,020
11	1,940	......	......	1,680	245	329	432	96	60	86	1,020	760
12	2,400	......	......	2,940	235	275	340	86	60	104	760	605
13	2,160	......	......	2,240	235	235	465	79	60	191	605	680
14	1,680	......	4,000	1,800	235	235	340	68	60	152	930	642
15	1,330	......	6,000	1,800	235	191	312	68	60	152	1,202	642
16	1,280	......	6,000	1,560	235	191	160	68	60	152	720	642
17	2,090	......	2,940	1,380	235	183	145	68	65	152	570	605
18	6,330	......	2,090	1,120	235	152	125	68	72	145	535	605
19	6,000	......	2,240	1,020	312	152	118	60	96	152	500	465
20	3,550	......	2,400	978	260	160	104	60	86	845	2,400	465
21	5,080	......	5,370	802	235	172	112	60	112	2,240	2,400	500
22	3,550	......	7,750	680	535	172	90	68	500	1,800	1,330	465
23	3,140	......	3,140	680	1,560	145	90	118	340	1,020	930	400
24	2,750	......	3,340	605	978	118	90	125	213	1,020	930	535
25	1,940	......	7,020	605	802	135	118	112	183	2,090	845	500
26	1,560	......	8,880	535	535	112	112	90	118	1,800	680	500
27	1,440	......	9,270	535	465	160	90	90	118	1,330	680	312
28	1,120	......	7,750	500	1,020	160	90	90	98	845	605	296
29	845	......	3,340	642	1,680	152	86	90	79	760	535	340
30	930	......	2,090	605	930	125	86	96	86	760	535	370
31	930	......	2,400	......	680	......	79	90	......	642	......	340

Monthly Discharge of Salmon River near Pulaski, N. Y.

[Drainage area, 260 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	6,330	760	2,320	8.92	10.28
February	....	....	530	2.04	2.12
March	9,270	....	2,980	11.50	13.26
April	5,080	500	1,570	6.04	6.74
May	1,680	235	491	1.89	2.18
June	802	112	282	1.08	1.20
July	465	79	155	0.596	0.69
August	125	60	80	0.308	0.36
September	500	60	106	0.408	0.46
October	2,240	79	572	2.20	2.54
November	2,400	340	805	3.10	3.64
December	1,680	296	602	2.32	8.26

NOTE.— Discharge, February 7 to March 13, inclusive, estimated by comparison with Black river near Boonville.

ORWELL BROOK NEAR ALTMAR, N. Y.

This gaging station is located at the highway bridge 1½ miles by road northwest of Altmar and one-eighth mile above the confluence of Orwell brook with the Salmon river. The drainage area of the stream at this point is 22.1 square miles.

The gage is of the chain-and-weight type, attached to the downstream side of the bridge. The bed of the stream is composed of small stones and gravel. During low stages current-meter measurements are made by wading and during high stages measurements are made from the bridge.

This station is maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission and the Salmon River Power Company of Niagara Falls, N. Y.

Mean Daily Gage Height, in Feet, of Orwell Brook at Altmar, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	2.60	2.65	2.40	3.00	2.20	2.15	1.85	1.75	1.70	1.80	2.35	2.25
2.....	2.35	2.75	2.25	2.92	2.20	2.36	1.85	1.75	1.70	1.82	2.25	2.28
3.....	3.20	2.78	2.78	2.78	2.15	2.28	1.84	1.75	1.70	1.85	2.20	2.30
4.....	3.35	2.72	2.62	3.20	2.15	2.20	1.82	1.75	1.70	1.79	2.25	2.35
5.....	3.05	2.62	2.45	3.05	2.15	2.12	1.80	1.75	1.70	1.78	2.25	2.35
6.....	3.15	3.00	2.45	2.92	2.12	2.08	1.80	1.74	1.70	1.75	2.20	2.30
7.....	3.75	......	2.52	2.78	2.10	2.50	1.79	1.72	1.70	1.75	2.15	2.40
8.....	3.70	......	2.62	2.68	2.05	2.35	1.79	1.75	1.69	1.75	2.10	2.82
9.....	3.50	......	2.85	2.62	2.05	2.18	1.80	1.75	1.68	1.75	2.38	2.72
10.....	3.35	......	2.92	2.50	2.05	2.08	1.98	1.80	1.68	1.75	2.58	2.48
11.....	3.30	......	2.82	3.05	2.05	2.05	1.88	1.76	1.70	1.75	2.42	2.42
12.....	3.20	......	2.78	2.95	2.05	2.02	1.88	1.75	1.70	1.95	2.35	2.58
13.....	3.10	......	2.88	2.72	2.02	2.00	2.05	1.72	1.70	1.95	2.32	2.38
14.....	3.05	......	4.70	2.60	2.02	1.98	1.91	1.71	1.70	1.90	2.45	2.35
15.....	2.81	......	4.80	2.48	2.02	1.95	1.85	1.70	1.70	1.85	2.35	2.35
16.....	2.85	3.80	4.00	2.40	2.02	1.95	1.84	1.70	1.70	1.85	2.34	2.35
17.....	4.00	3.75	4.00	2.38	2.02	1.94	1.82	1.70	1.75	1.85	2.25	2.44
18.....	4.30	3.70	4.00	2.40	2.11	1.90	1.81	1.70	1.75	1.90	2.22	2.42
19.....	4.00	3.70	3.15	2.40	2.10	1.90	1.80	1.70	1.70	2.00	2.30	2.41
20.....	3.50	3.70	3.40	2.35	2.05	1.95	1.78	1.70	1.70	3.00	2.95	2.35
21.....	3.90	3.20	4.00	2.35	2.05	1.95	1.78	1.70	1.78	3.10	2.68	2.35
22.....	3.40	2.80	3.60	2.68	2.72	1.94	1.75	1.78	2.16	2.75	2.55	2.37
23.....	3.05	2.70	3.10	3.00	2.55	1.90	1.75	1.80	1.88	2.53	2.50	2.40
24.....	3.40	2.80	3.25	3.00	2.40	1.86	1.80	1.75	1.80	2.95	2.45	2.40
25.....	3.10	3.10	4.20	2.25	2.40	1.85	1.80	1.70	1.80	2.90	2.40	2.40
26.....	2.88	3.00	4.60	2.25	2.40	1.95	1.79	1.70	1.80	2.92	2.35	2.35
27.....	2.98	2.70	4.80	2.30	2.75	1.99	1.76	1.70	1.78	2.64	2.30	2.70
28.....	2.78	2.45	3.80	2.62	2.70	1.94	1.75	1.70	1.78	2.55	2.25	2.52
29.....	2.62	......	3.20	3.50	2.58	1.86	1.75	1.80	1.78	2.40	2.25	2.45
30.....	2.50	......	3.00	2.25	2.36	1.85	1.75	1.75	1.75	2.40	2.25	2.45
31.....	2.60	......	3.10	......	2.22	......	1.75	1.70	......	2.40	......	2.40

NOTE.— Gage heights affected by ice conditions during the greater part of February.

Current-meter Discharge Measurement of Orwell Brook at Altmar, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913. May 30	C. S. De Golyer...........	2.42	896	*Feet.* 2	0.2 & 0.8	*Sq. ft.* 36.6	*Feet.* 26	*Sec.-ft.* 47.3

Mean Daily Discharge, Second-feet, of Orwell Brook at Altmar, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	66	72	47	119	30	26	11	8	6	9	42	34
2.....	42	84	34	108	30	43	11	8	6	10	34	36
3.....	149	88	88	88	26	36	11	8	6	11	30	38
4.....	173	81	68	149	26	30	10	8	6	9	34	42
5.....	126	68	52	126	26	24	9	8	6	8	34	42
6.....	142	......	52	108	24	22	9	7	6	8	30	38
7.....	241	......	58	88	23	56	9	7	6	8	26	47
8.....	232	......	68	76	20	42	9	8	6	8	23	94
9.....	198	......	98	68	20	29	9	8	6	8	45	81
10.....	173	......	108	56	20	22	16	9	6	8	64	54
11.....	165	......	94	126	20	20	12	8	6	8	49	49
12.....	149	......	88	112	20	18	12	8	6	15	42	64
13.....	134	......	102	81	18	17	20	7	6	15	40	45
14.....	126	......	431	66	18	16	13	6	6	13	52	42
15.....	92	......	453	54	18	15	11	6	6	11	42	42
16.....	98	......	288	47	18	15	11	6	6	11	42	42
17.....	288	......	288	45	18	15	10	6	8	11	34	51
18.....	347	......	288	47	24	13	9	6	8	13	32	49
19.....	288	......	142	47	23	13	9	6	6	17	38	48
20.....	198	......	181	42	20	15	8	6	6	119	112	42
21.....	269	......	288	42	20	15	8	6	8	134	76	42
22.....	181	......	215	76	81	15	8	8	27	84	61	40
23.....	126	......	134	119	61	13	8	9	12	61	56	47
24.....	181	......	157	119	47	11	9	8	9	112	52	47
25.....	134	......	327	34	47	11	9	6	9	105	47	47
26.....	102	......	410	34	47	15	9	6	9	108	42	42
27.....	116	......	453	38	84	17	8	6	8	71	38	78
28.....	88	......	250	68	78	15	8	6	8	61	34	58
29.....	68	......	149	198	64	11	8	9	8	47	34	52
30.....	56	......	119	34	43	11	8	8	8	47	34	52
31.....	66	......	134	......	32	......	8	6	......	47	......	47
Mean...	155	40	183	80.5	33.7	20.7	10.0	7.16	7.67	38.6	44.0	49.4

Monthly Discharge of Orwell Brook at Altmar, N. Y.
[Drainage area, 22.1 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January..........................	347	42	155.00	7.01	8.08
February..........................	....	....	40.00	1.81	1.88
March..........................	453	34	183.00	8.28	9.55
April..........................	198	34	80.50	3.64	4.06
May..........................	84	18	33.70	1.52	1.75
June..........................	56	11	20.70	0.937	1.05
July..........................	20	8	10.00	0.452	0.52
August..........................	9	6	7.16	0.324	0.37
September..........................	27	6	7.67	0.347	0.39
October..........................	134	8	38.60	1.75	2.02
November..........................	112	23	44.00	1.99	2.22
December..........................	94	34	49.40	2.24	2.58

NOTE.— Discharge, February 6 to 28, inclusive, estimated by comparison with Salmon river near Pulaski.

OSWEGO-ONEIDA-SENECA RIVER DRAINAGE BASIN.

DESCRIPTION OF BASIN.

Oswego river is formed by the union of Seneca and Oneida rivers at Three River Point about twelve miles northwest of Syracuse, N. Y., whence its course is northwestward to Oswego, where it enters Lake Ontario. The length of the river, from the junction to the mouth, is about 20.5 miles, and the drainage basin along this distance is a narrow strip of country, moderately rolling. Above the junction of Seneca and Oneida rivers the basin spreads out, attaining an extreme width east and west of about 100 miles and north and south of from seventy to eighty miles. There is, on the whole, a gradual rise from the low, level lands which border Lake Ontario to the north-south ridges which separate the various lakes south of Seneca river and which farther south become merged with the still more elevated country lying along the southern boundary of the Lake Ontario watershed.

The most remarkable feature of the drainage basin is the chain of lakes stretching across its southern border. From west to east the principal lakes are, in order, Canandaigua, Keuka, Seneca, Cayuga, Owasco, Skaneateles and Oneida. These seven lakes include a water-surface of, approximately, 280 square miles, increased by four smaller lakes — Cross, Onondaga, Otisco and Cazenovia — to about 295 square miles. The larger of the lakes, Oneida, Cayuga and Seneca, are used for steam-towing navigation, having connection with the Erie and Oswego canals. Cayuga and Seneca lakes are noted for their depth and for the abrupt slopes of their beds. The influence of the lakes on Oswego river is of the utmost importance in contributing to the steadiness of its flow.

A fall of 100 feet in the course of the main river is largely utilized by seven dams, which also partly canalize the stream. The intervening stretches are covered by the Oswego canal, which draws its water-supply from the river.

Drainage Areas Tributary to Oneida Lake and Oneida River.[a]

LOCALITY.	Area in Square Miles.		
	Place to place.	Sub-total.	Total.
East branch, Fish creek.			
Head to junction with Alder creek	45.40	45.40	
Alder creek	25.70	71.10	
Junction with Alder creek to junction with Point Rock creek.	36.70	107.80	
Point Rock creek	19.90	127.70	
Junction with Point Rock creek to junction with Fall brook.	4.50	132.20	
Fall brook	13.50	145.70	
Junction with Fall brook to junction with Florence creek	1.30	147.00	
Florence creek	20.40	167.40	
Junction with Florence creek to junction with Furnace creek (Taberg)	1.70	169.10	
Furnace creek	14.40	183.50	
Taberg to junction with West branch, Fish creek	3.60	187.10	
West branch, Fish creek.			
Head to lower dam, Williamston	25.80	25.80	
Williamston to West Camden	27.10	52.90	
West Camden to junction with Mad river, Camden	14.20	67.10	
Mad river	45.40	112.50	
Camden to junction with Little river	21.60	134.10	
Little river	52.10	186.20	
Little river to McConnellsville	4.00	190.20	
McConnellsville to junction with East branch, Fish creek	11.90	202.10	
Junction of East and West branches, Fish creek, to junction with Wood creek	27.80	389.20	417.00
Wood creek.			
Above Erie canal, Rome	10.20	10.20	
Erie canal, Rome, to junction with Mud creek	2.00	12.20	
Mud creek	20.00	32.20	
Junction with Mud creek to junction with Canada creek	6.40	38.60	
Canada creek	31.00	69.60	
Junction with Canada creek to junction with Stoney creek.	1.20	70.80	
Stoney creek	20.40	91.20	
Junction with Stoney creek to junction with Fish creek	31.40	122.60	122.60
Oneida creek.			
Head to Peterboro	13.40	13.40	
Peterboro to falls	6.70	20.10	
Falls to Munnsville	15.60	35.70	
Munnsville to Kenwood	27.30	63.00	
Kenwood to Oneida Castle (State dam)	10.80	73.80	
Oneida Castle to Sconondoa creek, Oneida	2.10	75.90	
Sconondoa creek	34.30	110.20	
Sconondoa creek to Durhamville	4.80	115.00	
Durhamville to mouth	28.00	143.00	143.00
Canaseraga creek.			
Head to Perryville	5.70	5.70	
Perryville to Erie canal	9.00	14.70	
Erie canal to Douglas ditch	8.10	22.80	
Cowasealon creek.			
Head to Clockville creek	17.20	17.20	
Clockville creek	11.10	28.30	
Clockville creek to Erie canal	5.50	33.80	
Erie canal to mouth of Douglas ditch	39.30	73.10	
Junction with Douglas ditch to Lakeport	3.20	95.90	99.10
Chittenango creek.			
Erieville reservoir, water-surface	0.45	0.45	
Erieville reservoir, land drainage	3.30	3.75	
Erieville reservoir to Cazenovia lake	30.50	34.25	
Cazenovia lake, water-surface	1.70	35.95	
Cazenovia lake, land drainage	8.70	44.65	
Cazenovia lake to Chittenango falls	14.40	59.05	
Chittenango falls to State dam, Chittenango	17.90	76.95	
State dam to junction with Butternut creek	28.10	105.05	
Butternut creek.			
Head to Jamesville reservoir	47.40	47.40	
Jamesville reservoir to State dam	5.70	53.10	
State dam to junction with Limestone creek	19.20	72.30	
Limestone creek.			
De Ruyter reservoir, water-surface	1.00	1.00	
De Ruyter reservoir, land drainage	17.80	18.80	
De Ruyter reservoir to junction with East branch	4.30	23.10	
East, or New Woodstock branch	12.60	35.70	

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[a] From U. S. Geological Survey topographic maps.

Drainage Areas Tributary to Oneida Lake and Oneida River — (Concluded).

LOCALITY.	AREA IN SQUARE MILES.		
	Place to place.	Sub-total.	Total.
Butternut creek (*Concluded*).			
Junction with East branch to junction with West branch	34.50	70.20	
West branch, Limestone creek, enters above State feeder dam	24.80	95.00	
State dam to junction with Butternut creek	18.20	113.20	185.50
Junction with Limestone creek to Chittenango creek	1.10	186.60	291.65
Chittenango creek, junction with Butternut creek to Bridgeport	30.30	321.95	
Chittenango creek, Bridgeport to Oneida lake	4.30	326.25	326.25
Oneida lake drainage through main streams	....	1,107.95	
Big Bay creek	26.30		
Little Bay creek	11.50		
Scriba creek	45.40		
Coast drainage, north shore Oneida lake	54.50		
Coast drainage, south shore Oneida lake	28.90	166.60	1,274.55
Water-surface, Oneida lake	78.00		
Land drainage, Oneida lake	1,274.55	1,352.55	
Oneida river.			
Brewerton to Caughdenoy creek	4.80	4.80	1,357.90
Caughdenoy creek	19.30	24.10	1,376.70
Caughdenoy creek to Oak Orchard	25.10	49.20	1,401.80
Mud creek	34.70	83.90	1,436.50
Oak Orchard to Potts creek	5.00	88.90	1,441.50
Potts creek	22.90	111.80	1,464.40
Six-Mile creek	24.00	135.80	1,488.40
Potts creek to Three River Point	4.50	140.30	1,492.90

Drainage Areas Tributary to Seneca River.[a]

LOCALITY.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	General total.
Mud creek.				
Head to and including Schaffer creek	51.31			
Junction with Schaffer creek to junction with Sucker brook, Victor (formerly Ganargua creek)	25.70	77.01		
Sucker brook	20.15	97.16		
Ganargua creek.				
Victor to Erie canal, Macedon	26.20	123.36		
Macedon to junction with East Red creek, East Palmyra	55.00	178.36		
East Red creek	59.50	237.86		
East Red creek to Canandaigua outlet	61.37	299.23	299.23	
Canandaigua lake.				
Naples creek	48.55	171.97		
West river	42.08			
Other land drainage	81.34			
Water-surface	16.40	....	188.37	
Canandaigua outlet.				
Foot of lake to and including Black brook	50.37	238.74		
Black brook to Flint creek, at Phelps	54.34	293.08	293.08	
Flint creek.				
Above Patten	31.59			
Patten to Gorham, not including Gorham swamp	24.84	56.43		
Gorham swamp	5.46	61.89		
Gorham to Orleans	25.57	87.46		
Orleans to junction with Canandaigua outlet at Phelps	15.21	102.67	395.75	
Phelps to junction with Ganargua creek at Lyons, forming Clyde river	48.36	444.11	743.34	

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[a] From U. S. Geological Survey topographic maps.

Drainage Areas Tributary to Seneca River — (Concluded).

LOCALITY.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	General total.
Clyde river.				
Lyons to junction with Seneca river, foot of Cayuga lake	141.11	884.45	....	884.45
Seneca river.				
Seneca lake.				
Keuka lake.				
Land drainage to outlet	160.96			
Water-surface	17.51	178.47		
Keuka outlet to Seneca lake	24.80	203.27		
Catharine creek.				
Above Montour Falls	66.46	....	640.93	
Montour Falls to Seneca lake	29 91	96.37		
Watkins Glen creek	23.53	23.53		
Direct lake drainage	317.76	317.76		
Water-surface	67.16	....	708.09	
Seneca river, foot of Seneca lake to Waterloo	40 90	....	748.99	
Seneca river, Waterloo to Seneca Falls	28.55	....	777.54	
Seneca river, Seneca Falls to Mud lock, foot of Cayuga lake	7.52	....	785.06	
Cayuga lake.				
Cascadilla creek	14.38			
Six-Mile creek	59.05			
Buttermilk creek	29.16			
Cayuga inlet	67.02			
Salmon creek	91.13			
Fall creek.				
Above Freeville	58.68			
Virgil creek	26.00	84.68		
Freeville to Cornell dam	30.62	115.20		
Cornell dam to Cayuga lake	1.56	116.76		
Taghanic creek.				
Above Halseyville	56.96			
Halseyville to Taghanic Falls	10.40	67.36		
Taghanic Falls to Cayuga lake	0.39	67.75		
Other Cayuga lake drainage	275.04	720.29		
Cayuga lake, water-surface	66.31	786.60	1,571.60	
Seneca river, Cayuga lake, to junction with Clyde river	15.42	....	1,587.02	2,471.47
Seneca river, junction with Clyde river to junction with Owasco outlet	146 23	....	....	2,617.70
Owasco lake.				
Owasco inlet, above Moravia	74.33			
Moravia to Owasco lake	42.92	117.25		
Direct drainage to lake	76.24	193.49		
Foot of lake to State dam	0.98	194.47		
Water-surface	10.40	204.87		
Owasco outlet to junction with Seneca river	16.73	221.66	....	2,839 30
Seneca river, junction with Owasco outlet to junction with Skaneateles outlet	98.70	....	....	2,938 00
Skaneateles lake.				
Land drainage to foot	58.41			
Water-surface	14.13	72.54		
Foot of lake to Willow Glen	1.84	74.38		
Willow Glen to Seneca river	16.69	91.07	....	3,029.07
Seneca river, Skaneateles outlet to Carpenter brook	25.50	....	....	3,054.57
Carpenter brook	18.70	....	....	3,073.27
Seneca river, Carpenter brook to Baldwinsville	48.10	....	....	3,121.37
Seneca river, Baldwinsville to Onondaga outlet	17.80	....	....	3,139.17
Onondaga lake.				
Otisco lake, land drainage to foot	41.40			
Otisco lake, water-surface	3.30	44.70		
Nine-Mile creek (Otisco outlet) to Onondaga lake	74.00	118.70		
Onondaga creek.				
Above junction with West brook	40.60			
Junction with West brook to inflow to Onondaga lake	65.30	105.90		
Other land drainage to Onondaga lake	59.10	283.70		
Onondaga lake, water-surface	4.70	288.40		
Onondaga lake, outlet to Seneca river	3.00	291.40	....	3,430.57
Seneca river, Onondaga outlet to Belgium	10.12	....	....	3,440.69
Seneca river, Belgium to Three River Point	4.40	....	....	3,445.09

Drainage Areas Tributary to Oswego River.[a]

LOCALITY.	AREA IN SQUARE MILES		
	Place to place.	Total from Three River Point.	Total drainage basin.
Oneida river, above Three River Point	....	....	1,493.00
Seneca river, above Three River Point	....	....	3,445.00
Oswego river at Three River Point	....	....	4,938.00
Three River Point to Phoenix	2.32	2.32	4,940.32
Phoenix to Hinmansville	17.58	19.90	4,957.90
Hinmansville to Ox creek	17.05	37.15	4,975.15
Ox creek	33.08	70.83	5,008.83
Ox creek to upper dam, Fulton	9.15	79.98	5,016.98
Fulton to Neatawanta creek	9.15	89.13	5,027.13
Neatawanta creek	21.92	111.05	5,049.05
Neatawanta creek to Black creek	1.01	112.06	5,050.06
Black creek	37.93	149.99	5,087.99
Black creek to Battle Island	0.92	150.91	5,088.91
Battle Island to Minetto	2.11	153.02	5,091.02
Minetto to High dam	4.87	157.89	5,095.89
High dam to Oswego dam	1.22	159.11	5,097.11
Oswego dam to Lake Ontario	1.21	160.32	5,098.32

[a] From U. S. Geological Survey topographic maps.

OSWEGO RIVER.

The drainage area tributary to Oswego river is 160 square miles. This area comprises chiefly moderately-rolling, cultivated upland, having a good depth of soil overlying the rock, which, as a rule, is visible only in the bed of the stream. A portion of the area is drained through lakes and marshes. The run-off from the direct drainage to Oswego river is moderate and the regimen differs but little from that resulting from the inflow of the two main tributaries — the Oneida and Seneca.

OSWEGO RIVER WATER-SURFACE ELEVATION RECORDS.

In the following series of tables there are given records of the mean daily elevation of water-surface of the Oswego river at different gaging stations during the year 1913. The elevations are uniformly referred to the Barge canal datum, which is equivalent to mean tide at New York, taken to be as elevation 14.73 below the old grist mill bench-mark at Greenbush (Rensselaer).

The tables of elevation of water-surface are arranged in order, proceeding upstream from the curved dam at Oswego through to Three River Point.

The accompanying table gives details as to the types of gages used, the datum of each and the manner in which they are read.

Water-surface Elevation Gages Maintained on the Oswego River During the Year 1913.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to —
Oswego, above curved dam	April 7, 1904	D. D. Tompkins	264 23	Staff	0 1 foot	0.1 foot.
Oswego, below high dam	April 7, 1904	James J. Frisbie	279 00	Ref. point	....	....
Oswego, above high dam	April 7, 1904	James J. Frisbie	264 00	Staff	0 1 "	0 1 "
Minetto, below dam	April 18, 1904	Barge canal employee	276 50	Staff	0 1 "	0 1 "
Minetto, above dam	April 18, 1904	Barge canal employee	300 86	Ref. point	....	0 1 "
Fulton, opposite Battle Island	Sept. 14, 1909	Barge canal employee	294 53	Staff	0 1 "	0 1 "
Fulton, below Battle Island dam	April 8, 1904	Barge canal employee	300 94	Chain	0 1 "	0 1 "
Fulton, above Battle Island dam	April 11, 1904	Barge canal employee	304 98	Staff	0 1 "	0 1 "
Fulton, above Battle Island dam, west side	Sept. —, 1911	Barge canal employee	307.96	Staff	0 1 "	0.1 "
Fulton, mouth of Waterhouse creek	April 9, 1904	Barge canal employee	315.00	Ref. point	0.1 "	0.1 "
Fulton, Volney Mills head-gates	Dec. 23, 1908	Barge canal employee	335 90	Ref. point	0.1 "	0 1 "
Fulton, above Oswego Falls dam	April 9, 1904	Barge canal employee	362 40	Ref. point	....	....
Fulton, mouth of Ox creek	April 12, 1904	B. M. Wilcox	347 71	Staff	0 1 "	0 1 "
Phoenix, Hinmansville bridge	April 13, 1904	Leon Hallenbeck	348 64	Chain	0 1 "	0 1 "
Phoenix, 1,600 feet below dam	April 1, 1913	Barge canal employee	....	....	....	....
Phoenix, below dam	April 16, 1904	G. Archambo	352 09	Staff	0 1 "	0 1 "
Phoenix, 200 feet above dam	Sept. 1, 1912	Barge canal employee	....	....	....	....

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Curved Dam, Oswego, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	268.23	269.63	268.33	271.73	268.63	268.53	266.83	266.23	264.33	266.93	266.83	267.13
2	268.03	269.63	268.53	271.63	268.73	267.83	266.83	266.43	266.43	267.03	267.03	267.13
3	268.03	269.23	268.13	271.53	268.73	267.83	266.83	266.83	266.43	267.03	266.23	267.03
4	268.63	269.23	268.13	271.63	268.73	267.93	267.23	*a*	266.43	265.93	266.83	267.03
5	269.23	269.63	268.13	271.53	268.63	267.83	266.83	264.53	265.43	265.83	266.13	266.93
6	268.93	268.73	268.13	271.43	268.63	267.83	267.23	*a*	266.33	265.73	266.83	267.13
7	269.23	268.43	267.83	271.23	268.43	267.73	266.63	266.43	266.83	266.63	266.73	266.93
8	269.33	268.23	267.63	271.13	268.13	268.03	266.63	264.93	265.83	266.73	266.73	266.83
9	269.43	268.43	267.93	270.83	268.23	267.53	266.83	*a*	266.83	266.93	267.23	267.13
10	269.43	268.43	267.93	270.73	268.13	267.63	266.63	264.33	266.83	266.93	266.23	267.13
11	269.33	268.43	268.13	270.63	268.23	267.53	266.63	*a*	266.03	266.93	266.83	267.13
12	269.63	268.43	268.63	270.63	268.23	267.13	266.83	*a*	264.93	266.83	266.83	267.03
13	269.63	268.53	269.03	270.73	267.93	267.13	266.93	264.83	266.33	265.13	266.93	267.23
14	269.53	268.53	269.63	270.53	267.93	267.33	265.83	265.33	266.83	266.63	267.23	267.23
15	269.43	268.23	270.03	270.33	267.83	267.33	266.63	265.03	266.03	266.33	267.23	267.03
16	269.43	268.53	270.23	270.23	267.83	267.13	266.33	264.93	266.13	266.43	267.23	267.13
17	269.63	268.33	269.83	270.13	267.73	267.43	266.53	266.63	266.03	266.33	266.63	267.13
18	269.83	268.13	269.73	270.03	267.73	267.33	266.53	264.23	265.73	266.63	267.03	267.13
19	270.23	268.13	269.73	269.83	267.53	267.23	266.33	265.73	265.43	266.73	267.03	267.13
20	269.73	268.13	269.63	269.73	267.53	267.23	266.63	265.73	265.93	264.23	267.03	267.33
21	270.23	268.03	269.53	269.53	267.63	267.23	265.43	266.03	265.53	266.53	267.13	267.13
22	270.23	268.03	269.43	269.33	267.63	267.73	266.53	265.53	265.63	266.23	267.33	266.63
23	270.33	268.43	269.53	269.23	267.83	267.43	266.53	265.83	266.93	266.43	267.33	267.13
24	270.33	268.33	269.23	269.23	267.83	267.13	266.23	266.43	266.93	266.63	266.83	267.13
25	270.33	268.33	269.63	269.13	267.93	266.83	266.43	*a*	266.93	266.73	267.13	267.23
26	270.53	268.23	270.13	268.93	267.73	266.83	266.33	266.03	266.93	267.23	267.23	267.23
27	270.13	268.23	270.93	269.03	267.73	266.93	266.83	265.83	266.93	264.93	267.53	267.53
28	270.13	268.23	271.33	268.93	268.43	267.13	264.53	266.33	266.73	266.93	267.13	267.53
29	270.03	......	271.53	268.83	268.33	267.43	266.13	266.43	266.23	266.93	267.13	267.13
30	269.83	......	271.83	268.63	268.53	267.03	266.33	265.33	267.03	266.93	267.13	267.13
31	269.63	......	271.83	......	268.23	......	266.43	266.83	......	266.83	......	267.13

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River below High Dam, near Oswego, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.a	Sept.a	Oct.a	Nov.	Dec.
1913.												
1.....	271.00	272.60	271.60	275.40	272.10	271.30	269.30	......	......	......	268.55	270.00
2.....	271.80	272.40	271.60	275.10	272.00	271.10	269.20	......	......	......	268.55	269.90
3.....	271.40	272.60	271.20	275.10	272.10	271.00	269.10	......	......	......	268.60	270.20
4.....	271.60	272.30	271.10	275.05	272.20	270.90	269.10	......	......	......	268.65	269.80
5.....	271.90	272.20	271.00	275.00	272.10	270.75	269.00	......	......	......	268.80	269.60
6.....	272.00	271.90	271.10	274.80	271.80	270.70	269.10	......	......	......	269.00	269.65
7.....	272.50	270.20	271.00	274.65	271.60	270.80	269.00	......	......	......	269.10	a
8.....	272.65	271.90	271.40	274.60	271.55	271.00	268.70	......	......	......	269.20	270.50
9.....	272.60	271.25	271.50	274.30	271.55	272.00	268.80	......	......	......	270.00	269.80
10.....	272.70	271.80	271.60	274.00	271.55	270.50	269.00	......	......	......	269.90	270.15
11.....	272.70	271.70	271.80	273.50	271.40	270.30	268.80	......	......	......	269.95	269.80
12.....	272.80	271.40	272.30	273.90	271.35	269.90	268.70	......	......	......	269.80	269.80
13.....	273.00	271.40	273.00	273.70	271.20	269.80	269.20	......	......	......	269.75	269.90
14.....	273.00	271.50	273.40	273.60	271.00	269.85	268.70	......	......	......	269.80	a
15.....	272.60	271.40	273.30	273.50	270.85	270.00	269.00	......	......	......	270.00	270.05
16.....	272.90	271.80	272.40	273.30	270.70	270.20	268.80	......	......	......	269.30	269.90
17.....	273.10	271.60	272.60	273.25	270.50	270.04	268.70	......	......	......	269.30	269.70
18.....	273.40	271.40	272.80	273.20	270.75	270.10	268.55	......	......	......	269.35	269.80
19.....	273.40	271.35	272.90	273.00	270.70	269.90	268.50	......	......	......	269.40	269.70
20.....	273.60	271.00	272.70	272.90	270.50	270.20	268.60	......	......	......	269.50	269.70
21.....	273.55	271.00	272.70	272.80	270.65	270.00	268.65	......	......	......	269.55	270.00
22.....	273.60	271.00	272.60	272.60	270.80	270.40	268.55	......	......	......	269.60	269.70
23.....	273.50	271.20	272.60	272.50	270.90	270.50	268.50	......	......	......	269.40	269.80
24.....	273.70	271.40	272.70	272.60	270.85	269.30	268.40	......	......	......	270.60	269.70
25.....	273.70	271.45	273.00	272.50	270.80	269.00	268.30	......	......	......	270.30	269.70
26.....	273.50	271.30	274.40	272.40	270.65	269.80	268.30	......	......	......	270.20	269.70
27.....	273.60	271.30	274.80	272.20	270.60	269.80	a	......	......	......	270.00	269.70
28.....	273.50	271.50	274.90	272.30	270.80	269.75	a	......	......	......	270.20	270.30
29.....	273.30	......	275.20	272.20	271.30	269.50	a	......	......	......	270.00	270.05
30.....	273.30	......	275.30	272.00	271.40	269.60	a	......	......	......	270.30	269.80
31.....	273.00	......	275.40	......	271.50	......	a	......	......	......	......	269.80

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above High Dam, near Oswego, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.a	Sept.a	Oct.a	Nov.	Dec.
1913.												
1.....	274.15	278.07	275.07	283.37	276.87	274.80	272.20	......	......	......	273.80	273.10
2.....	274.25	277.77	274.27	283.17	276.77	274.25	272.15	......	......	......	273.80	272.90
3.....	274.35	277.52	274.27	283.07	276.47	274.10	272.25	......	......	......	273.00	273.20
4.....	274.50	276.27	274.42	283.02	276.37	273.95	272.10	......	......	......	272.90	272.80
5.....	274.55	275.97	274.27	282.97	276.17	273.75	272.10	......	......	......	272.80	272.50
6.....	274.95	275.47	274.27	282.67	276.07	273.85	272.10	......	......	......	272.75	272.45
7.....	a	275.47	274.37	282.67	276.07	273.95	272.05	......	......	......	272.70	a
8.....	277.77	275.17	274.17	282.37	275.97	273.50	271.80	......	......	......	272.60	272.90
9.....	277.57	275.17	274.57	282.17	275.97	273.20	271.90	......	......	......	272.95	272.70
10.....	277.37	274.67	274.97	281.77	275.37	273.40	272.00	......	......	......	273.05	272.90
11.....	276.97	274.47	275.07	281.47	275.47	273.00	271.90	......	......	......	273.00	272.70
12.....	277.17	274.47	276.57	281.17	275.32	272.90	271.80	......	......	......	272.80	272.70
13.....	278.57	274.47	277.57	280.97	275.17	273.10	272.15	......	......	......	273.20	272.90
14.....	278.52	274.57	278.07	280.87	274.97	273.10	271.80	......	......	......	272.90	a
15.....	278.17	274.17	278.97	280.47	274.97	273.20	272.00	......	......	......	273.05	272.80
16.....	278.32	275.07	277.97	279.97	274.87	273.30	271.90	......	......	......	272.60	272.90
17.....	278.77	274.87	278.07	279.77	274.87	273.20	271.80	......	......	......	272.55	272.95
18.....	279.17	274.77	278.17	279.57	274.87	273.45	271.50	......	......	......	272.60	273.00
19.....	279.67	274.57	278.47	279.37	274.87	272.90	271.40	......	......	......	272.55	273.10
20.....	278.97	274.47	278.27	278.77	274.77	273.10	271.40	......	......	......	272.60	273.15
21.....	280.17	274.37	278.27	278.67	a	273.30	271.35	......	......	......	272.50	272.85
22.....	280.37	274.37	278.17	278.37	a	273.20	271.30	......	......	......	272.50	273.00
23.....	280.17	274.77	278.07	278.17	274.10	273.10	271.20	......	......	......	273.20	272.80
24.....	280.47	275.07	278.17	277.97	274.20	272.40	271.10	......	......	......	273.40	272.85
25.....	280.47	274.87	278.67	277.77	274.20	272.20	271.00	......	......	......	273.10	272.80
26.....	280.07	274.72	279.97	277.52	274.40	273.10	a	......	......	......	273.20	272.80
27.....	280.17	274.67	281.87	277.37	274.55	272.60	a	......	......	......	272.90	272.80
28.....	279.97	274.87	282.17	277.17	274.70	273.10	a	......	......	......	273.10	272.55
29.....	279.77	......	282.87	277.42	274.90	272.45	a	......	......	......	273.10	272.80
30.....	279.67	......	282.77	277.07	275.00	272.50	a	......	......	......	272.80	272.90
31.....	279.37	......	283.37	......	274.90	......	a	......	......	......	......	272.90

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River below Dam at Minetto, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1.....	293.27	294.87	290.27	297.17	291.57	291.09	291.99	290.59	290.19	290.59	291.39	292.39
2.....	293.17	294.67	290.17	296.77	291.27	291.09	291.99	290.79	290.29	290.69	292.39	292.39
3.....	293.47	294.47	289.97	296.57	291.07	291.29	292.09	289.29	290.09	289.49	291.99	292.09
4.....	294.07	293.97	289.97	296.27	290.77	291.59	292.19	289.39	289.19	289.29	290.99	292.09
5.....	294.37	293.77	290.27	295.97	291.07	291.39	291.89	289.39	289.49	289.29	291.29	292.09
6.....	294.67	293.47	290.17	295.47	291.07	291.09	290.89	290.69	289.69	289.59	291.99	292.19
7.....	295.17	292.37	290.37	295.77	290.97	291.99	291.49	289.99	289.79	290.49	292.29	292.09
8.....	295.47	292.07	290.77	295.27	291.07	291.19	291.89	289.39	289.49	290.59	291.89	292.19
9.....	295.57	291.87	291.07	294.87	290.97	291.39	291.99	289.39	290.09	290.59	292.19	292.19
10.....	295.47	291.57	291.57	294.47	290.97	291.09	291.99	289.29	290.39	290.69	291.89	292.19
11.....	295.57	291.37	291.57	294.27	290.77	290.79	291.99	289.19	289.09	290.59	291.99	292.29
12.....	295.57	291.07	292.07	294.07	290.97	290.89	292.09	289.19	289.09	290.69	291.99	292.19
13.....	295.57	291.07	292.87	293.87	290.77	291.19	291.99	289.69	289.29	289.59	291.99	291.19
14.....	295.47	290.87	294.07	293.87	290.77	291.69	291.49	289.89	289.59	290.39	291.99	291.09
15.....	295.37	290.77	293.97	243.87	290.67	291.79	291.69	289.79	289.89	290.59	291.99	291.09
16.....	295.47	290.77	293.87	293.87	290.47	292.69	291.89	289.89	289.79	290.79	291.69	*a*
17.....	295.77	290.87	293.77	293.67	290.57	291.69	291.89	289.69	288.99	290.59	291.99	*a*
18.....	296.17	290.87	293.47	293.27	290.27	292.19	291.89	290.09	288.89	290.79	292.09	*a*
19.....	296.17	290.97	292.97	293.27	290.27	292.19	291.39	290.19	288.89	290.59	292.09	*a*
20.....	296.27	290.97	292.97	293.07	290.27	291.99	289.79	290.29	288.99	290.79	292.19	*a*
21.....	296.27	290.87	293.17	292.97	290.27	291.99	290.39	290.19	289.59	290.39	292.29	*a*
22.....	296.37	290.77	292.77	292.77	290.27	292.89	291.39	290.29	290.39	290.19	292.29	*a*
23.....	296.27	290.67	292.17	292.67	290.37	292.79	291.49	290.09	290.39	290.69	292.49	*a*
24.....	296.37	290.87	293.07	292.47	290.47	291.19	291.49	289.99	290.89	291.19	292.59	*a*
25.....	296.37	290.77	293.67	292.37	290.27	291.39	291.59	290.29	290.69	291.29	292.49	*a*
26.....	296.37	290.67	294.37	292.17	290.57	292.19	290.99	290.39	290.39	291.59	292.49	*a*
27.....	296.27	290.47	296.27	291.67	291.67	292.19	289.39	290.69	290.79	291.69	292.49	*a*
28.....	296.07	290.37	296.37	292.07	291.87	291.99	289.79	289.49	290.39	291.69	292.39	*a*
29.....	295.97	......	296.67	292.07	291.87	290.79	290.99	289.39	290.29	291.59	292.39	*a*
30.....	295.47	......	296.97	291.87	292.07	291.99	290.59	289.09	291.09	291.69	292.39	*a*
31.....	294.97	......	297.27	.....	292.27	......	290.79	288.89	......	291.39	......	*a*

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Dam at Minetto, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.*a*	June.	July.	Aug.	Sept.*a*	Oct.	Nov.	Dec.
1913.												
1.....	298.47	300.27	297.67	302.47	......	295.65	295.05	294.65	......	293.45	294.35	295.35
2.....	298.47	300.07	297.57	302.37	......	295.25	295.25	294.35	......	293.65	295.35	295.35
3.....	298.67	299.97	297.47	302.37	......	295.35	295.25	291.25	......	292.55	294.65	295.05
4.....	299.37	299.77	297.37	302.27	......	295.65	295.25	291.65	......	292.35	293.75	294.95
5.....	299.57	299.67	297.97	302.07	......	295.45	295.15	291.35	......	292.45	294.15	294.85
6.....	299.97	299.57	297.77	301.77	......	295.45	294.35	293.65	......	292.65	294.65	294.95
7.....	300.37	298.67	297.97	301.97	......	296.35	294.65	292.55	......	293.65	294.85	294.85
8.....	300.77	298.47	298.17	301.57	......	295.25	295.15	291.35	......	293.55	294.65	294.75
9.....	300.77	298.47	298.37	301.37	......	295.55	295.45	291.45	......	293.85	294.85	294.95
10.....	300.67	298.37	298.77	301.07	......	295.05	295.35	291.45	......	293.55	294.55	294.85
11.....	300.77	298.27	298.77	301.07	......	294.65	295.25	292.65	......	293.55	294.65	291.85
12.....	300.77	298.07	299.27	300.97	......	294.85	295.25	292.45	......	293.85	294.65	294.75
13.....	300.77	298.07	299.87	300.77	......	295.05	294.25	293.45	......	292.65	294.65	293.95
14.....	300.67	298.07	300.77	300.87	......	295.25	294.65	293.25	......	293.55	294.65	293.95
15.....	300.57	297.97	300.77	300.77	......	295.35	294.95	293.25	......	293.65	294.75	293.95
16.....	300.77	298.07	300.67	300.57	......	295.75	295.15	293.35	......	293.75	294.25	*a*
17.....	300.97	298.17	300.57	300.57	......	295.05	295.25	292.85	......	293.65	294.75	*a*
18.....	301.17	298.17	300.27	300.47	......	295.25	295.25	293.45	......	293.85	294.95	*a*
19.....	301.37	298.27	300.07	300.27	......	295.25	294.65	293.45	......	293.65	294.95	*a*
20.....	301.47	298.27	299.97	300.07	......	295.05	292.65	293.55	......	293.75	294.95	*a*
21.....	301.47	298.17	299.87	299.97	......	295.15	293.35	293.55	......	293.55	294.95	*a*
22.....	301.57	298.17	299.57	299.77	......	295.55	294.65	293.55	......	293.25	294.95	*a*
23.....	301.57	298.07	299.27	299.67	......	295.55	294.65	293.35	......	293.65	295.25	*a*
24.....	301.47	298.17	299.87	299.57	......	294.85	294.75	293.05	......	293.95	295.45	*a*
25.....	301.47	298.07	300.37	299.47	......	294.65	294.95	293.45	......	294.05	295.25	*a*
26.....	301.47	297.97	300.77	299.47	......	294.25	294.65	293.55	......	294.45	295.25	*a*
27.....	301.37	297.87	301.87	298.57	......	294.85	291.65	293.75	......	294.55	295.15	*a*
28.....	301.27	297.77	302.27	298.87	......	295.05	292.65	292.75	......	294.55	294.95	*a*
29.....	301.17	......	302.37	298.87	......	294.25	294.65	292.75	......	294.45	295.15	*a*
30.....	300.87	......	302.47	298.67	......	295.05	294.45	292.45	......	294.55	295.25	*a*
31.....	300.57	......	302.57	......	......	......	294.65	292.25	......	294.35	......	*a*

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River opposite Battle Island, near Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	302.91	306.03	303.07	310.07	304.33	302.73	300.68	299.80	297.93	299.98	300.68	*a*
2	303.01	305.67	302.15	309.87	304.38	302.63	300.43	299.88	299.03	299.73	298.73	*a*
3	303.47	305.68	303.57	309.78	304.33	302.23	300.78	299.43	299.43	299.98	300.88	*a*
4	304.43	305.63	303.07	309.83	303.63	302.33	300.23	297.93	298.43	298.03	300.58	*a*
5	304.63	305.45	303.11	309.58	304.48	302.43	300.23	298.33	298.73	297.93	299.88	*a*
6	305.11	304.73	302.93	309.13	303.88	301.83	300.33	299.08	299.55	297.63	300.93	*a*
7	305.68	304.18	302.28	309.08	303.73	302.28	300.23	299.84	299.33	298.88	300.63	*a*
8	305.98	303.78	302.35	308.93	303.88	301.83	300.53	298.61	298.38	299.23	300.58	*a*
9	306.33	303.63	302.15	308.53	303.33	302.18	300.43	297.36	299.43	299.33	*a*	*a*
10	306.03	304.43	303.13	308.28	303.13	302.03	300.34	298.03	299.55	299.48	301.08	*a*
11	304.93	303.78	303.68	308.23	302.83	300.93	300.03	298.36	298.23	299.28	300.93	*a*
12	306.18	303.71	304.28	308.18	302.93	300.98	300.08	299.33	298.13	297.78	300.88	*a*
13	306.63	303.65	305.18	307.73	302.73	301.23	299.33	298.48	299.33	297.53	300.93	*a*
14	306.35	303.67	306.38	307.93	302.68	301.33	300.18	299.23	298.63	299.03	301.03	*a*
15	306.41	303.68	306.98	307.65	302.43	301.63	300.13	298.70	297.88	299.33	301.03	301.98
16	306.28	303.59	306.73	307.38	302.38	301.48	299.98	298.61	298.28	299.43	299.73	301.38
17	306.59	303.68	306.63	307.13	301.88	301.03	299.98	298.13	298.23	299.33	301.43	301.28
18	307.09	303.53	306.43	306.88	301.83	301.23	299.68	298.33	298.28	299.75	301.23	301.23
19	307.33	304.38	305.33	306.53	302.33	300.68	299.83	299.43	297.78	299.43	301.13	301.18
20	307.48	303.33	305.13	305.68	301.68	301.23	299.18	299.43	297.88	299.43	301.23	301.13
21	307.73	303.21	306.03	306.13	301.73	301.22	299.43	299.33	*a*	299.38	301.33	299.43
22	307.73	303.31	305.73	305.88	*a*	301.73	299.90	299.33	297.88	299.18	301.43	301.53
23	307.73	303.47	305.08	305.68	302.63	302.03	299.78	299.43	299.38	299.48	301.33	*a*
24	307.83	303.83	305.68	305.43	302.53	300.43	299.72	299.03	299.68	299.98	301.28	301.38
25	307.69	303.76	306.33	305.23	301.83	300.23	299.83	298.78	299.88	300.43	301.48	300.53
26	307.48	303.65	307.33	304.98	302.43	300.43	299.97	299.38	299.98	299.08	301.43	300.63
27	307.43	303.43	309.08	304.18	302.03	301.36	299.33	299.55	299.78	299.68	301.33	301.28
28	307.23	303.35	309.52	305.13	303.53	300.98	298.70	299.57	298.28	301.08	301.28	300.58
29	306.98	....	309.85	304.43	303.43	298.53	299.57	299.57	298.03	300.88	301.43	301.08
30	306.65	......	309.85	304.29	302.98	300.78	299.82	299.43	299.98	300.83	300.13	301.18
31	306.33	.....	310.27	......	303.28	......	299.75	298.23	......	300.78	......	301.13

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River below Battle Island Dam, near Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.*a*	Aug.*a*	Sept.*a*	Oct.*a*	Nov.*a*	Dec.*a*
1913.												
1	304.54	306.24	304.44	309.01	305.04	304.64	......	......	......	......	......	......
2	304.59	306.04	304.54	309.86	305.09	304.49	......	......	......	......	......	......
3	304.74	306.09	304.64	309.74	305.09	304.34	......	......	......	......	......	......
4	305.74	306.44	304.44	309.74	304.84	304.34	......	......	......	......	......	......
5	305.34	305.94	304.44	309.44	305.14	304.44	......	......	......	......	......	......
6	305.74	305.94	304.44	309.14	304.94	304.24	......	......	......	......	......	......
7	306.09	304.64	304.44	309.34	304.84	304.39	......	......	......	......	......	......
8	306.34	304.64	304.44	309.04	304.94	304.29	......	......	......	......	......	......
9	306.64	304.64	304.14	308.64	304.74	304.29	......	......	......	......	......	......
10	306.54	304.64	304.44	308.34	304.64	304.29	......	......	......	......	......	......
11	306.29	304.64	304.64	308.34	304.54	303.79	......	......	......	......	......	......
12	306.44	304.64	305.04	308.29	304.62	303.94	......	......	......	......	......	......
13	306.94	304.64	305.64	307.84	304.54	304.09	......	......	......	......	......	......
14	306.64	304.64	305.54	308.04	304.46	304.14	......	......	......	......	......	......
15	306.64	304.64	307.14	307.69	304.54	304.24	......	......	......	......	......	......
16	306.54	304.64	306.94	307.49	304.49	304.19	......	......	......	......	......	......
17	306.84	304.64	305.81	307.24	304.32	303.99	......	......	......	......	......	......
18	307.24	304.64	306.54	307.01	304.24	304.09	......	......	......	......	......	......
19	307.49	304.64	306.54	306.64	304.15	*a*	......	......	......	......	......	......
20	307.64	304.54	306.34	306.04	304.14	*a*	......	......	......	......	......	......
21	307.84	304.54	306.24	306.29	304.19	*a*	......	......	......	......	......	......
22	307.89	304.54	306.14	305.19	*a*	*a*	......	......	......	......	......	......
23	307.89	304.54	305.54	305.94	304.44	*a*	......	......	......	......	......	......
24	307.94	304.64	306.04	305.79	304.36	*a*	......	......	......	......	......	......
25	307.89	304.64	306.54	305.64	304.34	*a*	......	......	......	......	......	......
26	307.59	304.64	307.44	305.49	304.39	*a*	......	......	......	......	......	......
27	307.54	304.59	309.19	305.09	304.39	*a*	......	......	......	......	......	......
28	307.34	304.54	309.47	305.59	304.84	*a*	......	......	......	......	......	......
29	307.14	......	309.67	305.14	304.84	*a*	......	......	......	......	......	......
30	306.84	......	......	305.04	304.64	*a*	......	......	......	......	......	......
31	306.54	......	310.04	......	304.76	......	......	......	......	......	......	......

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Battle Island Dam, near Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	310.48	311.76	310.46	313.52	311.07	310.61	309.71	309.53	308.18	309.76	309.85	*a*
2	310.54	311.64	310.58	313.48	311.08	310.46	309.61	309.61	309.44	309.63	309.41	*a*
3	310.78	311.68	310.46	313.48	311.06	310.22	309.67	309.27	309.62	309.83	309.76	*a*
4	311.08	311.58	310.48	313.48	310.82	310.32	309.34	308.86	309.06	308.83	309.58	*a*
5	311.14	311.38	310.50	313.31	311.13	310.37	309.58	309.19	309.49	308.97	309.35	*a*
6	311.38	311.22	310.48	313.11	310.90	310.18	309.55	309.71	309.71	308.87	309.66	*a*
7	311.60	310.98	310.18	313.18	310.83	310.31	309.50	309.86	309.52	309.43	309.60	*a*
8	311.70	310.80	310.08	313.04	310.92	310.18	309.64	309.20	309.01	309.63	309.61	*a*
9	311.88	310.62	310.14	312.86	310.69	310.31	309.63	308.42	309.66	309.73	*a*	*a*
10	311.78	310.83	310.48	312.73	310.58	310.25	309.58	308.88	309.68	309.83	309.78	*a*
11	311.68	310.80	310.17	312.73	310.49	309.62	309.48	309.27	309.15	309.78	309.67	*a*
12	311.78	310.76	311.14	312.70	310.52	309.77	309.48	309.60	309.10	309.13	309.66	*a*
13	312.08	310.72	311.64	312.50	310.46	309.91	309.18	309.55	309.45	308.98	309.69	*a*
14	311.98	310.76	311.86	312.63	310.45	309.98	309.58	309.50	309.12	309.60	309.70	*a*
15	311.88	310.76	312.13	312.50	310.38	310.12	309.54	309.47	309.02	309.71	309.72	*a*
16	311.83	310.70	311.88	312.38	310.36	310.01	309.51	309.44	309.07	309.63	309.43	309.88
17	312.00	310.73	311.98	312.23	310.29	309.76	309.57	309.17	308.98	309.50	309.88	309.84
18	312.18	310.68	311.88	312.12	310.18	309.88	309.44	309.38	308.86	309.86	309.89	309.83
19	312.28	310.63	311.85	312.01	310.11	309.87	309.40	309.69	308.67	309.59	309.76	309.80
20	312.33	310.58	311.78	311.67	310.06	309.88	309.25	309.54	308.73	309.63	309.78	309.79
21	312.44	310.56	311.73	311.78	310.08	309.88	309.23	309.50	*a*	309.13	309.82	309.34
22	312.46	310.58	311.63	311.78	*a*	310.08	309.42	309.52	308.68	309.56	309.86	309.96
23	312.46	310.68	311.44	311.65	310.39	310.13	309.48	309.61	309.52	309.68	309.47	*a*
24	312.50	310.76	311.70	311.55	310.33	309.52	309.47	309.30	309.52	309.91	310.06	309.86
25	312.46	310.70	311.88	311.49	310.31	309.48	309.59	309.31	309.77	310.09	310.02	309.73
26	312.38	310.64	312.33	311.39	310.36	309.61	309.61	309.51	309.71	309.47	310.00	309.91
27	312.36	310.60	313.12	311.08	310.35	309.89	309.27	309.66	309.68	309.80	309.96	309.93
28	312.24	310.58	313.32	311.44	310.91	309.80	308.88	309.71	308.98	310.18	309.97	309.73
29	312.12	......	313.50	311.13	310.86	309.68	309.37	309.38	309.06	310.08	309.98	309.78
30	311.98	......	*a*	311.05	310.68	309.68	309.41	309.51	309.82	309.99	309.51	309.92
31	311.92	......	313.66	......	310.78	......	309.37	309.02	......	309.87	......	309.93

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Battle Island Dam, West Side, near Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	310.46	311.74	310.44	313.49	311.05	310.62	309.68	309.54	308.13	309.73	309.84	*a*
2	310.51	311.58	310.12	313.52	311.06	310.47	309.61	309.59	309.43	309.61	309.38	*a*
3	310.76	311.64	310.44	313.44	311.04	310.19	309.66	309.25	309.60	309.81	309.75	*a*
4	310.98	311.56	310.46	313.43	310.86	310.28	308.53	308.81	309.03	309.83	309.56	*a*
5	311.14	311.36	310.48	313.29	311.12	310.34	309.56	309.17	309.47	309.95	309.34	*a*
6	311.34	311.18	310.46	313.09	310.85	311.26	309.53	309.66	309.70	309.86	309.64	*a*
7	311.56	310.96	310.16	313.15	310.81	310.31	309.49	309.84	309.52	309.42	309.57	*a*
8	311.66	310.76	310.08	313.02	310.91	310.16	309.62	309.22	309.02	309.61	309.59	*a*
9	311.84	310.58	310.12	312.84	310.68	310.29	309.61	308.42	309.63	309.71	*a*	*a*
10	311.74	310.80	310.46	312.73	310.56	310.23	309.58	308.88	309.66	309.82	308.76	*a*
11	311.66	310.78	310.15	312.69	310.46	309.63	309.46	309.27	309.13	309.78	309.65	*a*
12	311.76	310.74	311.12	312.59	310.51	309.76	309.45	309.60	309.09	309.11	309.02	*a*
13	312.06	310.70	311.62	312.49	310.43	309.90	309.16	309.56	309.44	308.94	309.68	*a*
14	311.96	310.74	311.84	312.60	310.42	309.97	309.56	309.49	309.13	309.59	309.18	*a*
15	311.86	310.74	312.11	312.43	310.36	310.11	309.53	309.46	308.99	309.69	309.70	310.12
16	311.81	310.68	311.86	312.36	310.34	310.01	309.46	309.42	309.06	309.63	309.42	309.87
17	311.94	310.71	311.96	312.21	310.29	309.76	309.53	309.17	308.96	309.50	309.87	309.83
18	312.12	310.66	311.86	312.14	310.16	309.81	309.40	309.36	308.85	309.85	309.87	309.82
19	312.22	310.61	311.83	312.00	310.28	309.86	309.40	309.67	308.65	309.59	309.75	309.80
20	312.30	310.56	311.76	311.65	310.06	309.86	309.24	309.54	308.70	309.61	309.76	309.79
21	312.40	310.54	311.71	311.86	310.08	309.87	309.29	309.46	*a*	309.46	309.80	309.34
22	312.44	310.56	311.61	311.73	*a*	310.09	309.48	309.50	308.67	309.53	309.86	309.96
23	312.44	310.66	311.42	311.66	310.44	310.12	309.53	309.60	309.51	309.67	309.44	*a*
24	312.46	310.74	311.68	311.56	310.38	309.51	309.50	309.29	309.47	309.90	310.04	309.86
25	312.44	310.68	311.86	311.50	310.31	309.46	309.62	309.27	309.75	310.08	310.00	309.71
26	312.36	310.62	312.31	311.40	310.36	309.64	309.63	309.50	309.72	309.47	309.98	309.77
27	312.28	310.58	313.08	311.12	310.33	309.86	309.31	309.64	309.67	309.78	309.96	309.88
28	312.22	310.56	313.29	311.43	310.91	309.80	309.83	309.70	308.94	310.17	309.95	309.68
29	312.10	......	313.42	311.10	310.86	308.66	309.39	309.37	309.08	310.04	309.98	309.86
30	311.96	......	*a*	311.03	310.68	309.66	309.44	309.51	309.79	309.96	309.50	309.91
31	311.90	......	313.62	......	310.88	......	309.39	309.02	......	309.85	......	309.90

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River at Mouth of Waterhouse Creek, Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	310.42	312.17	310.67	314.57	311.27	310.72	309.67	309.47	308.77	309.67	309.82	309.72
2.....	310.57	311.77	310.57	314.37	311.17	310.77	309.67	309.42	309.42	309.67	309.12	309.97
3.....	310.62	311.97	310.52	314.17	311.17	310.42	309.57	309.27	309.37	309.77	309.47	309.77
4.....	311.37	311.62	310.92	314.37	310.82	310.57	309.37	308.47	309.07	308.97	309.57	309.77
5.....	311.37	311.67	310.62	314.12	311.27	310.42	309.47	308.47	309.27	308.97	309.27	309.62
6.....	311.52	311.67	310.62	313.77	311.27	310.37	309.47	309.17	309.27	308.72	309.62	309.57
7.....	311.77	311.12	310.67	313.97	310.97	310.52	309.57	309.72	308.97	309.37	309.42	309.12
8.....	311.97	311.32	310.37	313.67	310.47	310.27	309.52	309.17	308.97	309.57	309.52	309.77
9.....	312.22	311.27	311.17	313.52	310.77	310.42	309.52	308.12	309.47	309.62	309.42	309.77
10.....	312.22	312.37	310.72	313.27	310.77	310.17	309.52	308.77	309.57	309.67	309.57	309.87
11.....	312.07	311.87	311.02	313.22	310.47	310.12	309.32	309.17	309.07	309.72	309.62	309.47
12.....	312.67	311.62	311.47	313.12	310.57	309.92	309.37	308.27	309.07	309.67	309.57	309.72
13.....	312.62	311.72	311.87	313.07	310.52	309.67	308.97	308.27	309.30	309.07	309.67	309.77
14.....	312.22	311.37	312.12	312.92	310.42	309.97	309.22	309.37	309.17	309.67	309.67	309.32
15.....	312.17	311.37	312.42	312.92	310.37	310.17	309.57	309.37	308.87	309.47	309.67	309.87
16.....	312.17	311.37	311.97	312.87	310.12	310.22	309.37	309.37	308.92	309.52	309.47	309.72
17	312.22	311.27	312.42	312.72	310.17	309.97	309.47	309.17	309.17	309.77	309.67	309.87
18.....	312.67	311.37	312.27	312.57	310.67	309.97	309.37	309.17	308.97	309.77	309.47	309.77
19.....	312.72	311.17	312.07	312.57	310.12	309.92	309.17	309.47	308.62	309.27	309.72	309.67
20.....	312.97	310.97	312.07	311.97	309.97	309.77	309.17	309.32	308.67	309.07	309.77	309.67
21	313.07	310.97	312.67	312.22	309.97	309.97	309.52	309.27	308.97	309.42	309.77	309.07
22.....	313.07	310.97	311.92	312.07	310.12	309.97	309.52	309.22	308.62	309.47	309.97	309.47
23.....	312.97	310.92	311.57	312.22	310.52	309.97	309.52	309.17	309.47	309.47	309.52	309.72
24.....	312.97	311.07	311.92	311.87	310.47	309.87	309.47	309.17	309.52	309.47	309.87	309.77
25.....	312.92	311.67	312.02	311.77	310.12	309.42	309.57	309.07	309.67	310.17	309.87	309.67
26.....	312.72	310.97	312.77	311.67	310.27	309.57	309.52	309.37	309.57	309.87	309.07	309.87
27	312.92	310.92	313.57	310.87	310.27	309.77	309.17	309.47	309.57	309.32	309.97	309.97
28.....	312.67	310.92	314.17	311.77	310.97	309.77	308.67	309.32	309.47	309.97	309.97	309.87
29.....	312.67	......	314.37	311.47	311.07	309.77	309.32	309.42	308.87	309.92	309.97	309.97
30.....	312.67	......	314.37	311.27	310.97	309.47	309.37	308.12	309.67	309.97	309.27	309.92
31.....	312.17	......	314.62	......	310.77	......	309.42	309.17	......	309.97	......	309.97

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Oswego Falls Dam, Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1. ...	355.15	357.30	354.40	357.60	352.30	352.80	354.40	352.45	352.60	353.10	353.30	354.00
2.....	355.35	356.70	354.40	357.50	353.00	352.20	355.40	353.05	352.70	353.00	353.20	353.90
3.....	355.45	356.40	354.60	357.50	353.10	353.00	354.30	353.00	352.20	353.20	353.70	353.80
4.....	356.15	356.20	354.20	357.50	353.20	352.70	354.40	352.80	351.50	351.90	353.20	353.60
5.....	356.45	356.00	353.70	357.30	353.30	352.80	355.20	351.50	352.70	351.00	354.00	353.30
6	356.65	355.90	354.00	357.30	352.90	352.50	354.00	353.60	352.90	350.60	353.30	353.20
7	356.70	355.80	353.00	357.10	352.90	352.70	353.40	353.05	352.30	352.10	353.80	353.50
8	357.15	355.00	353.25	356.10	354.50	351.40	353.80	351.50	352.10	352.80	352.70	354.10
9.....	357.45	354.80	353.70	355.35	353.25	352.70	352.60	352.10	352.80	352.70	352.60	353.70
10.....	357.15	354.90	354.20	354.70	353.00	353.00	353.20	351.30	352.50	352.70	353.70	353.90
11.....	357.15	355.20	354.80	354.70	353.00	352.20	353.10	351.70	351.65	352.80	353.50	353.80
12.....	357.35	355.00	355.50	354.60	352.90	352.50	353.10	353.00	351.30	351.70	353.30	354.00
13.....	357.35	354.50	355.60	355.00	353.35	353.40	352.60	352.85	352.30	351.20	353.50	353.00
14.....	357.65	354.60	354.95	354.90	352.90	352.40	353.30	352.90	352.10	352.10	353.70	353.50
15.....	357.35	354.70	354.40	354.30	353.90	353.10	352.80	352.80	352.00	352.80	353.50	352.80
16.....	357.35	354.80	354.20	353.25	353.00	351.80	353.05	352.80	351.40	352.50	353.60	353.70
17.....	357.45	355.60	354.20	353.05	352.60	352.60	353.05	352.70	351.00	352.80	354.15	353.70
18.....	357.80	354.40	354.25	352.85	353.15	352.70	352.70	352.50	350.70	351.70	353.70	353.50
19.....	358.05	354.40	354.10	352.35	353.05	353.00	352.90	353.00	350.70	352.65	353.70	353.60
20.....	358.10	354.40	353.70	353.10	352.95	353.00	352.90	352.80	351.00	352.50	353.60	353.10
21.....	358.25	354.30	353.55	353.10	353.54	352.50	352.70	352.90	351.00	351.30	355.35	353.40
22.....	358.35	354.30	353.30	352.75	353.10	353.00	352.90	351.90	351.80	352.50	353.80	353.70
23.....	358.45	354.70	353.40	352.70	352.30	353.90	352.60	353.00	352.80	352.60	354.00	353.30
24.....	358.35	354.50	353.55	352.90	352.90	352.20	353.00	352.80	353.10	352.60	354.30	353.20
25.....	358.25	354.65	353.50	352.80	353.20	352.50	353.10	352.40	353.10	352.60	353.60	354.10
26.....	358.25	354.45	353.35	352.80	353.50	353.10	352.80	352.80	353.10	352.30	354.00	353.80
27.....	358.05	354.45	355.85	353.80	352.90	352.80	352.50	352.90	353.00	353.70	353.80	353.70
28.....	358.05	354.20	356.90	353.40	353.60	351.80	352.90	352.70	353.00	353.65	353.80	352.70
29.....	357.55	......	357.40	352.90	353.00	352.70	353.10	351.90	352.50	352.50	353.80	352.00
30.....	357.60	......	357.70	352.90	353.20	354.50	353.00	352.75	353.10	353.30	354.00	352.80
31.....	357.50	......	357.80	......	353.40	......	353.90	352.80	......	353.20	......	352.80

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River, at Mouth of Ox Creek, near Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	355.61	357.51	354.61	358.71	353.41	352.51	354.31	353.01	352.51	353.01	353.21	354.01
2.....	355.61	357.11	354.21	358.61	353.51	352.41	354.61	352.91	352.21	353.01	353.11	353.81
3.....	355.61	356.91	352.61	358.61	353.51	353.21	354.71	352.81	352.21	352.61	353.41	353.71
4.....	356.71	356.81	354.41	358.51	353.71	353.01	354.41	352.51	351.51	351.51	353.11	353.51
5.....	356.81	356.91	353.61	358.31	353.51	353.11	354.01	352.21	352.61	351.01	353.81	353.31
6.....	357.31	356.81	353.81	358.31	353.41	353.01	353.61	353.11	352.61	350.81	353.11	353.21
7.....	357.31	356.21	353.51	358.01	353.41	352.91	353.61	352.61	351.61	352.31	352.81	353.41
8.....	357.61	355.61	353.31	357.31	354.21	352.71	353.31	351.41	352.21	352.81	352.71	353.81
9.....	357.81	355.61	353.81	356.51	353.61	353.11	352.71	352.21	352.61	352.71	352.61	353.71
10.....	357.61	355.61	354.51	355.91	353.31	352.91	353.21	352.21	352.51	352.71	353.11	353.71
11.....	357.61	355.81	355.21	355.81	353.31	352.71	353.01	351.71	351.51	352.61	353.31	353.61
12.....	357.91	355.81	355.81	355.81	353.21	352.71	353.01	352.31	351.61	351.31	353.31	353.51
13.....	358.01	355.51	355.51	355.81	353.51	353.31	352.81	352.61	352.31	351.41	353.51	353.11
14.....	358.01	355.21	355.61	355.51	353.21	353.41	352.91	352.61	352.01	352.31	353.51	353.51
15.....	358.01	355.21	355.71	355.21	353.41	353.31	353.01	352.51	352.11	352.71	353.51	353.61
16.....	358.11	355.11	355.21	354.71	353.51	353.21	352.91	352.51	351.21	352.51	353.71	353.71
17.....	358.11	355.11	355.01	354.21	353.31	352.81	352.91	352.51	350.91	352.81	354.11	353.71
18.....	358.41	355.01	354.81	354.01	353.21	353.11	352.81	352.51	350.71	352.61	353.61	353.61
19.....	358.51	354.91	354.71	354.01	533.11	353.01	352.81	352.71	350.61	352.41	353.61	353.51
20.....	358.61	354.71	354.41	354.21	354.91	353.01	352.51	352.81	350.61	352.31	353.71	353.21
21.....	358.81	354.61	354.11	354.01	353.01	352.71	352.71	352.71	350.71	352.31	353.71	353.41
22.....	358.81	354.71	354.01	353.71	353.31	353.21	352.71	352.61	352.21	352.61	353.71	353.31
23.....	358.81	355.01	354.11	353.71	353.21	353.01	352.71	352.61	352.71	352.81	353.71	353.21
24.....	358.81	355.01	354.01	353.71	352.91	352.21	352.91	352.61	352.91	352.91	354.31	353.51
25.....	358.81	355.01	354.41	353.61	353.11	352.51	352.91	352.51	353.01	352.61	354.11	353.71
26.....	358.71	354.81	355.41	353.51	353.51	352.51	352.81	352.51	353.01	352.61	353.81	353.71
27.....	358.51	354.61	357.71	354.31	353.31	352.51	352.41	352.51	353.01	352.91	353.71	353.71
28.....	358.41	354.61	358.01	353.71	354.01	352.11	352.51	352.51	352.71	353.51	353.61	353.11
29.....	358.21	......	358.41	353.41	353.51	353.11	353.01	352.41	352.91	353.41	353.71	352.41
30.....	358.11	......	358.41	353.41	353.51	354.51	352.91	352.41	352.91	353.41	354.01	352.81
31.....	358.01	......	358.61	.....	353.51	......	352.91	352.41	......	353.31	......	352.81

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River at Hinmansville Bridge, near Phoenix, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	356.14	358.34	355.94	360.44	354.64	353.54	354.34	353.14	352.74	351.74	353.64	354.24
2.....	356.44	358.24	355.74	360.34	354.74	353.64	354.54	352.94	352.74	351.14	353.54	354.04
3.....	356.64	358.54	354.54	360.24	354.74	353.64	354.64	352.74	352.64	350.94	353.74	353.84
4.....	356.94	358.74	355.34	360.04	354.94	353.54	354.74	352.54	352.84	350.34	353.94	353.64
5.....	357.04	358.94	355.64	359.94	355.14	353.44	354.54	352.74	352.74	352.54	354.04	353.99
6.....	357.64	359.14	355.24	359.64	354.84	353.54	354.34	352.64	352.84	350.94	354.14	353.74
7.....	357.94	359.54	355.04	359.34	354.54	353.84	354.14	351.64	352.74	352.54	353.64	354.24
8.....	358.14	359.64	354.94	358.94	354.34	353.74	353.94	351.94	352.54	353.54	352.74	354.34
9.....	358.34	360.04	354.74	358.44	354.24	354.14	353.64	351.84	352.34	353.34	352.84	354.14
10.....	358.44	360.34	355.74	357.84	354.14	353.54	353.54	352.14	351.24	353.14	353.34	354.14
11.....	358.34	360.14	356.54	357.84	354.04	353.34	353.34	351.94	352.34	353.04	353.54	354.14
12.....	358.44	359.64	356.94	357.74	353.94	352.94	353.24	352.14	352.44	351.54	353.64	353.94
13.....	358.74	359.34	357.14	357.54	353.94	352.84	353.14	352.34	352.54	351.64	353.74	353.74
14.....	359.14	359.14	356.84	357.44	353.74	353.44	353.24	352.54	352.44	351.94	353.74	353.84
15.....	359.34	358.94	356.74	357.14	353.54	353.34	353.24	352.64	352.24	352.14	353.94	353.94
16.....	359.14	358.64	356.44	356.84	353.44	352.34	353.04	352.64	351.04	352.34	353.84	354.14
17.....	358.94	358.34	356.54	356.84	353.54	353.14	352.94	352.54	350.94	352.64	354.24	354.14
18.....	358.74	358.14	356.24	356.34	353.34	353.34	352.94	352.74	350.54	352.74	354.14	353.94
19.....	359.14	357.94	356.04	356.24	353.24	353.44	353.04	352.94	350.44	352.64	354.34	353.74
20.....	359.34	357.64	355.94	356.14	353.14	353.54	352.94	353.14	350.54	352.84	354.44	353.64
21.....	359.54	357.34	355.84	356.04	353.24	353.64	352.94	352.94	350.64	352.94	354.34	353.74
22.....	359.74	357.34	355.74	355.74	353.74	353.44	352.94	352.74	350.84	353.04	354.24	354.04
23.....	359.64	357.04	355.64	355.54	354.04	353.14	353.04	352.64	351.94	352.84	354.34	354.14
24.....	359.64	356.74	355.94	355.44	353.54	352.94	353.04	352.54	352.54	352.94	354.64	354.34
25.....	359.54	356.54	356.34	355.14	353.74	352.64	353.14	352.74	353.44	352.84	354.44	354.14
26.....	359.54	356.34	357.14	355.04	353.94	352.34	353.04	352.94	353.54	353.34	354.34	353.94
27.....	359.44	356.14	359.14	354.94	354.14	352.14	352.84	352.74	353.24	353.54	354.24	353.64
28.....	359.04	356.04	359.64	354.74	354.04	352.54	352.94	351.94	353.34	353.84	354.14	352.64
29.....	358.94	......	360.14	354.64	353.94	352.84	353.14	352.34	352.94	353.94	354.34	352.84
30.....	358.74	......	360.84	354.54	353.74	353.54	353.24	352.64	353.14	354.14	354.44	353.14
31.....	358.54	......	360.34	......	353.64	......	353.24	352.64	......	353.94	......	353.34

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River 1,600 feet below Dam at Phoenix, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.a	Sept.	Oct.	Nov.	Dec.
1913.												
1	....	....	....	363.60	356.90	354.90	354.90	....	353.00	353.60	354.00	355.10
2	....	....	....	363.40	356.90	355.20	355.00	....	353.00	353.50	353.60	354.70
3	....	....	....	363.20	356.90	355.20	355.40	....	352.80	353.70	354.20	354.60
4	....	....	....	363.20	356.50	355.00	354.70	....	351.70	351.90	353.90	354.40
5	....	....	....	363.00	356.90	355.00	354.70	....	353.20	351.10	354.40	354.20
6	....	....	....	362.80	356.50	354.70	354.00	....	353.30	352.00	354.00	354.00
7	....	....	....	362.60	356.30	354.80	354.10	....	352.40	352.70	353.60	353.90
8	....	....	....	362.10	356.50	354.20	354.30	....	352.80	353.20	353.60	354.90
9	....	....	....	361.60	356.00	354.90	353.40	....	353.30	353.20	352.90	354.70
10	....	....	....	361.10	355.70	354.80	353.90	....	353.20	353.20	354.30	354.70
11	....	....	....	361.20	355.40	353.50	353.70	....	351.80	353.10	354.10	354.60
12	....	....	....	361.10	355.80	353.80	353.50	....	352.20	351.50	354.20	354.50
13	....	....	....	360.80	355.60	354.40	353.50	....	353.00	352.10	354.30	354.10
14	....	....	....	360.80	355.30	354.50	354.10	....	352.30	352.80	354.40	354.10
15	....	....	....	360.30	355.00	354.80	353.60	....	352.80	353.10	354.40	354.90
16	....	....	....	360.00	355.10	353.90	353.50	....	351.80	353.00	354.20	354.70
17	....	....	....	359.70	354.60	354.10	353.50	....	351.40	353.10	355.00	354.60
18	....	....	....	359.40	354.50	354.70	353.40	....	351.30	353.20	354.60	354.50
19	....	....	....	359.20	354.90	354.00	353.50	....	351.30	352.70	354.50	354.40
20	....	....	....	358.60	354.50	354.10	352.90	....	351.30	353.10	354.70	354.10
21	....	....	....	358.90	354.50	354.00	353.40	....	351.20	352.90	354.70	353.60
22	....	....	....	358.40	354.90	354.70	353.40	....	352.50	353.00	354.80	354.60
23	....	....	....	358.20	355.20	354.60	353.20	....	353.40	352.90	354.60	354.20
24	....	....	....	358.00	354.70	353.30	353.50	....	353.60	353.50	355.30	354.20
25	....	....	....	357.70	355.20	353.40	353.70	....	353.60	353.30	355.00	354.40
26	....	....	....	357.40	355.20	354.00	353.40	....	353.60	352.80	354.90	354.90
27	....	....	....	357.10	354.70	353.90	352.70	....	353.70	354.30	354.70	354.70
28	....	....	....	357.60	356.20	353.70	353.20	....	353.80	354.30	354.70	353.30
29	....	....	....	357.20	356.00	352.90	353.60	....	353.30	354.20	a	353.90
30	....	....	....	356.90	355.70	355.00	353.50	....	353.60	354.20	354.60	354.20
31	....	....	....	....	355.80	....	353.50	....	....	354.10	....	a

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River below Dam at Phoenix, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.a	July.a	Aug.a	Sept.a	Oct.	Nov.	Dec.
1913.												
1	356.75	360.05	a	a	356.95	....	....	....	....	353.59	353.94	354.99
2	357.25	360.25	a	a	357.05	....	....	....	....	353.59	353.59	354.69
3	357.75	360.25	a	a	357.05	....	....	....	....	353.64	353.59	354.49
4	358.45	360.25	a	a	356.75	....	....	....	....	352.89	353.69	354.49
5	358.75	360.15	a	a	356.65	....	....	....	....	352.09	353.89	354.29
6	358.85	360.25	a	362.95	356.50	....	....	....	....	352.09	354.19	354.64
7	359.15	360.25	a	362.75	356.25	....	....	....	....	352.59	353.89	353.99
8	359.35	360.25	a	362.75	356.05	....	....	....	....	352.99	353.49	354.99
9	359.65	360.45	357.95	362.65	355.95	....	....	....	....	353.29	353.99	354.89
10	359.85	360.45	358.15	362.55	355.75	....	....	....	....	353.29	354.09	354.69
11	360.05	360.35	358.15	362.55	355.70	....	....	....	....	353.19	354.29	354.59
12	360.15	a	358.35	362.35	355.55	....	....	....	....	353.09	354.59	354.29
13	360.15	a	358.55	362.05	355.35	....	....	....	....	352.09	354.49	354.39
14	360.25	a	358.65	361.75	355.25	....	....	....	....	352.59	354.59	354.19
15	360.45	a	358.85	361.55	355.05	....	....	....	....	353.19	354.49	354.59
16	360.45	a	358.85	361.15	355.05	....	....	....	....	353.09	354.19	354.59
17	360.55	a	358.85	360.95	354.95	....	....	....	....	352.99	354.49	354.69
18	360.65	a	358.75	360.65	354.90	....	....	....	....	353.09	354.69	354.59
19	360.75	a	358.75	360.45	354.85	....	....	....	....	353.59	354.89	354.39
20	360.65	a	358.65	360.35	354.85	....	....	....	....	352.99	354.69	354.09
21	360.65	a	358.55	360.05	354.75	....	....	....	....	352.99	354.84	353.89
22	360.55	a	358.85	359.85	354.75	....	....	....	....	353.09	354.69	354.09
23	360.55	a	358.75	359.75	354.75	....	....	....	....	353.39	354.49	354.29
24	360.55	a	360.55	359.35	354.75	....	....	....	....	353.64	355.29	354.29
25	360.45	a	361.05	359.05	354.95	....	....	....	....	353.39	355.09	354.39
26	360.35	a	361.65	358.55	354.95	....	....	....	....	352.99	354.09	354.49
27	360.35	a	362.25	358.05	354.75	....	....	....	....	354.09	354.69	354.59
28	360.35	a	a	357.65	354.75	....	....	....	....	354.39	354.79	353.29
29	360.25	....	a	357.35	354.65	....	....	....	....	354.39	354.79	352.09
30	360.15	....	a	356.95	354.65	....	....	....	....	354.24	354.59	352.09
31	360.15	....	a	....	354.65	....	....	....	....	354.09	....	352.09

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Dam at Phoenix, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.a	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	......	365.90	363.40	363.50	363.40	......	362.70	362.00	363.50	363.80
2	......	......	......	365.90	363.40	363.30	363.40	......	362.50	361.70	363.60	363.80
3	......	......	......	365.80	363.40	363.30	363.30	......	362.30	361.20	363.60	363.70
4	......	......	......	365.70	363.80	363.30	363.50	......	362.80	362.00	363.40	363.60
5	......	......	......	365.60	363.50	363.30	363.50	......	362.50	362.50	363.50	363.60
6	......	......	......	365.60	363.40	363.50	363.60	......	362.50	362.50	363.50	363.50
7	......	......	......	365.50	363.30	363.40	363.40	......	362.40	362.30	363.50	363.90
8	......	......	......	365.30	363.80	363.60	363.20	......	362.40	362.40	363.50	363.80
9	......	......	......	365.10	363.70	363.30	363.20	......	362.10	362.40	363.50	363.80
10	......	......	......	365.00	363.60	363.20	363.10	......	361.80	362.30	363.60	363.80
11	......	......	......	365.00	363.60	363.20	363.10	......	362.20	362.30	363.60	363.70
12	......	......	......	364.90	363.30	363.60	363.10	......	362.40	362.50	363.60	363.80
13	......	......	......	364.80	363.40	363.80	363.50	......	361.90	362.40	363.60	363.90
14	......	......	......	364.60	363.30	363.80	363.30	......	361.80	362.50	363.70	364.00
15	......	......	......	364.50	363.50	363.60	363.10	......	361.60	362.50	363.70	363.90
16	......	......	......	364.50	363.70	363.50	363.10	......	361.70	362.60	363.90	363.90
17	......	......	......	364.20	363.40	363.50	363.10	......	362.00	362.70	363.80	363.80
18	......	......	......	364.10	363.60	363.20	363.00	......	362.10	362.40	363.70	363.70
19	......	......	......	363.90	363.40	363.30	362.90	......	362.20	362.10	363.70	363.70
20	......	......	......	363.90	363.60	363.40	363.20	......	362.40	362.40	363.80	363.70
21	......	......	......	363.60	363.70	363.30	363.20	......	362.70	362.60	363.90	363.80
22	......	......	......	363.50	363.80	363.50	363.00	......	362.80	362.80	363.80	363.70
23	......	......	......	363.30	363.40	363.30	362.90	......	362.80	363.00	363.90	363.80
24	......	......	......	363.40	363.10	363.10	362.80	......	362.70	363.10	363.90	363.80
25	......	......	......	363.30	363.60	363.30	362.60	......	362.60	363.10	363.90	364.00
26	......	......	......	363.40	363.30	363.60	362.50	......	362.60	363.50	363.80	363.80
27	......	......	......	363.80	363.50	363.40	362.70	......	362.40	363.60	363.80	363.80
28	......	......	......	363.40	363.60	363.20	362.90	......	362.70	363.60	363.80	363.90
29	......	......	......	363.20	363.50	363.50	362.60	......	362.40	363.60	a	363.80
30	......	......	......	363.40	363.40	363.30	362.30	......	362.00	363.60	364.00	363.80
31	......	......	......	......	363.30	......	362.20	......	......	363.60	......	a

a No record.

OSWEGO RIVER OPPOSITE BATTLE ISLAND, NEAR FULTON, N. Y.

A gage was established September 14, 1900, on the Oswego river opposite Battle Island. This station was maintained by the United States Geological Survey in coöperation with this Department. The results may be found in the supplement of the report of the State Engineer and Surveyor of New York for 1902, pages 86–91; for 1903, pages 41–42, and for 1904, pages 512–513. The gage readings were discontinued in 1905. On May 25, 1907, a gage was erected by this Department on the right-hand bank of the Oswego river opposite Battle Island and directly across the stream from the former gage.

The discharge from the year 1907 has not been taken out. On April 26, 1908, a new gage was erected on the left-hand side of the stream, the same side as that on which the old U. S. Geological Survey gage was located, but at a point about 400 feet further upstream. This gage is a 7/8-in. by 6-in. board, subdivided to feet and tenths, reading from 5 to 15 feet. It is spiked to a 4-in. by 6-in. post set in the ground, the upper end of which is bolted to a slanting tree. The zero mark of the gage is at elevation 294.53. The zero mark of the old U. S. Geological Survey gage nearby was at elevation 298.16, Barge canal datum. The discharge is calculated from the rating determined in connection with the old U. S. Geological Survey gage, the gage readings being corrected by subtracting 3.67 to reduce them to equivalent readings of the U. S. Geological Survey gage.

During 1913 the gage opposite Battle Island has been read by a Barge canal employee, readings being taken each morning and night. The stream freezes over in part, but no winter discharge measurements are available and the flow for the winter months has been computed from the open water rating table. The winter records for former years, determined in the same manner, probably give somewhat excessive run-off for some months.

Mean Daily Discharge, Second-feet, of Oswego River at Battle Island, near Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	6,910	13,467	7,203	*a*	9,812	6,633	3,400	2,380	930	2,580	3,400	*b*
2.....	7,105	12,590	5,558	*a*	9,915	6,448	3,080	2,470	1,705	2,330	1,485	*b*
3.....	7,990	12,700	8,190	*a*	9,812	5,733	3,530	2,045	2,045	2,580	3,660	*b*
4.....	10,018	12,590	7,203	*a*	8,390	5,908	2,855	930	1,278	1,000	3,270	*b*
5.....	10,435	12,150	7,300	*a*	10,120	6,083	2,855	1,210	1,485	930	2,470	*b*
6.....	11,390	10,642	7,608	*a*	8,890	5,055	2,965	1,750	2,135	730	3,725	*b*
7.....	12,700	9,505	5,820	*a*	8,590	5,820	2,855	2,425	1,955	1,590	3,335	*b*
8.....	13,355	8,600	5,908	*a*	8,890	5,055	3,205	1,380	1,245	1,870	3,270	*b*
9.....	14,140	8,390	5,558	*a*	7,790	5,645	3,080	700	2,045	1,955	*b*	*b*
10.....	13,467	10,018	7,398	*a*	7,398	5,385	2,965	1,000	2,135	2,090	3,930	*b*
11.....	11,060	8,600	8,490	*a*	6,818	3,725	2,635	1,210	1,143	1,910	3,725	*b*
12.....	13,801	8,490	9,710	*a*	7,008	3,790	2,690	1,955	1,080	825	3,660	*b*
13.....	14,812	8,390	11,605	17,300	6,633	4,145	1,955	1,310	1,955	670	3,725	*b*
14.....	14,140	8,390	14,252	17,840	6,540	4,290	2,800	1,870	1,415	1,705	3,860	*b*
15.....	14,232	8,490	15,613	17,120	6,083	4,740	2,745	1,450	895	1,955	3,860	5,300
16.....	14,028	8,290	15,036	16,520	5,995	4,510	2,580	1,380	1,175	2,045	2,330	4,360
17.....	14,700	8,490	14,812	15,960	5,130	3,860	2,580	1,080	1,143	1,955	4,435	4,220
18.....	15,850	8,190	14,364	15,378	5,055	4,145	2,280	1,210	1,175	2,330	4,145	4,145
19.....	16,400	9,915	14,140	14,588	5,908	3,400	2,425	2,045	825	2,045	4,000	4,070
20.....	16,760	7,790	13,922	12,700	4,820	4,145	1,830	2,045	895	2,045	4,145	4,000
21.....	17,360	7,495	13,467	13,692	4,900	4,070	2,045	1,955	*b*	2,000	4,290	2,045
22.....	17,360	7,890	12,808	13,130	*b*	4,900	2,471	1,955	895	1,830	4,435	4,585
23.....	17,360	7,990	11,390	12,700	6,448	5,385	2,380	2,045	2,000	2,090	4,290	*b*
24.....	17,600	8,790	12,700	12,150	6,262	3,080	2,280	1,705	2,280	2,580	4,220	4,360
25.....	17,240	8,590	14,140	11,712	5,055	2,855	2,425	1,520	2,470	3,080	4,510	3,205
26.....	16,760	8,390	16,400	11,170	6,083	3,680	2,525	2,000	2,580	1,750	4,435	3,335
27.....	16,640	7,990	*a*	9,505	5,385	4,290	1,955	2,135	2,380	2,280	4,290	4,220
28.....	16,180	7,790	*a*	11,498	8,190	3,790	1,450	2,135	1,175	3,930	4,220	3,270
29.....	15,614		*a*	10,018	7,990	1,345	2,135	2,135	1,000	3,660	4,435	3,930
30.....	14,812		*a*	9,710	7,105	3,530	2,380	2,045	2,580	3,505	2,745	4[illegible]
31.....	14,140		*a*		7,690	......	2,330	1,143	......	3,530	......	4[illegible]
Mean...	14,012	9,307	10,760	13,486	7,157	4,495	2,570	1,697	1,587	2,112	3,734	3,[illegible]

a Beyond limit of rating curve. *b* No record.

Monthly Discharge of Oswego River at Battle Island near Fulton, N. Y.
[Drainage area, 5,080 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	17,600	6,910	14,012	2.75	3.17
February	13,467	7,495	9,307	1.83	1.91
March	a16,400	5,558	10,760	2.12	2.44
April	a17,840	9,505	13,486	2.65	2.96
May	10,120	4,820	7,157	1.41	1.63
June	6,633	1,345	4,495	0.883	0.985
July	3,530	1,450	2,570	0.505	0.582
August	2,470	700	1,697	0.336	0.387
September	2,580	825	1,587	0.312	0.348
October	3,930	670	2,112	0.415	0.478
November	4,510	1,485	3,734	0.734	0.819
December	5,300	2,045	3,945	0.775	0.894

a Actual maximum beyond limits of rating table.

PRECIPITATION RECORDS.

A rain gage has been established by this Department at South Granby on the Oswego drainage area. Precipitation records have been kept as follows:

Daily Precipitation, in Inches, at South Granby, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	......	0.07	......	......	......	......	......	......	......	......
2	......	......	0.35	......	......	......	......	......	......	0.13	......	......
3	......	*0.05	......	......	......	......	......	......	......	......	......	0.20
4	1.95	*0.12	*0.23	0.70	......	......	......	0.30	......	......	0.30	......
5	......	......	......	......	......	......	0.29	......	......	......	......	0.10
6	......	......	*0.05	......	......	......	......	......	0.11	......	......	......
7	......	......	......	......	......	0.06	......	......	......	......	......	0.27
8	......	......	*0.07	......	......	0.04	......	......	......	......	......	0.20
9	......	*0.05	......	......	......	......	......	......	......	......	0.34	......
10	......	*0.10	......	......	......	......	......	0.44	......	......	0.69	......
11	0.43	......	0.24	1.10	......	......	......	......	......	......	......	......
12	0.52	*0.10	......	......	......	......	......	......	......	0.65	......	*0.11
13	......	*0.31	......	......	......	......	0.23	......	......	......	......	......
14	......	......	0.23	......	......	......	0.19	......	0.03	0.05	0.24	......
15	......	......	......	......	......	......	......	......	......	......	......	......
16	......	......	......	......	0.09	0.30	......	......	......	......	......	......
17	0.40	......	......	......	......	......	......	......	0.19	......	......	......
18	0.25	......	......	......	0.17	......	......	......	0.12	......	......	......
19	......	......	......	0.10	0.09	......	......	......	......	0.40	0.23	......
20	......	......	......	......	......	0.33	......	......	......	1.26	0.56	......
21	......	......	......	......	0.05	......	......	......	0.23	0.40	......	......
22	0.36	......	......	......	0.95	......	......	......	2.00	......	0.13	......
	......	0.30	......	......	0.43	......	0.19	0.14	......	......	0.30	......
	0.29	......	0.15	......	0.11	......	......	......	......	0.10	......	*0.66
	......	......	1.05	......	......	......	......	0.10	......	0.75	0.15	......
	......	......	1.07	......	......	......	......	......	......	0.53	......	*0.10
	......	*0.33	0.94	......	0.30	......	......	0.15	......	......	......	......
	*0.17	......	0.33	0.20	1.97	......	0.10	......	......	......	......	......
	......	......	......	0.50	......	......	......	0.50	......	......	......	......
	......	......	......	......	......	......	......	......	......	0.22	......	......
3	......	......	......	......	......	......	0.05	......	......	......	......	......

* Snow.

ONEIDA RIVER DRAINAGE BASIN.

Oneida lake has a water-surface area of 80 square miles and lies at an elevation of 370 feet above tide. The drainage basin within a radius of ten miles to the south and west is relatively flat, with numerous swampy tracts. The lake receives, through Chittenango and Oneida creeks, drainage from an extensive area of the central New York plateau and, through Wood and Fish creeks on the east, drainage from a portion of the west slope of the plateau bordering the Adirondack mountains. On the north the drainage area is less extensive and the inflowing streams are small.[a]

The outflow from the lake through Oneida river joins Seneca river at Three River Point, forming Oswego river. From Brewerton to Three River Point the distance, in a straight line, is but eight miles; following the windings of the stream it is sixteen miles.

Oneida river will be canalized in connection with the Barge canal work. Two large and two smaller bends will be cut off, the largest cut-off being opposite Caughdenoy. The system of eel weirs formerly located in the river at Caughdenoy has been replaced by a substantial masonry dam. A lock has also been placed in the cut-off channel, the object of the dam and lock being to maintain the water at a navigable depth in the canal and river above the lock to the foot of Oneida lake at Brewerton. The dam at Oak Orchard has been removed, and the low navigable stage of the stream from Three River Point up to Lock 26, located in the cut-off at Caughdenoy, will be 363.0, or the same as the pool level in Oswego river from Phœnix to Three River Point.

WATER-SURFACE ELEVATION RECORDS FOR ONEIDA RIVER AND TRIBUTARIES.

The following series of tables shows the mean daily elevation of water-surface at various gaging stations during 1913 as determined from various gages located on Oneida river, Oneida lake and tributaries.

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[a] A portion of the drainage area is shown on the Syracuse, Chittenango, Oneida, Oriskany, Morrisville, Casenovia and Tully topographic atlas sheets of the United States Geological Survey.

The elevation of water-surface is in all cases referred to Barge canal datum, which is mean tide level at New York city, taken as being 14.73 ft. below a certain bench-mark known as grist mill bench-mark, at Greenbush (Rensselaer), N. Y.

The tables are arranged in order going upstream from Three River Point and show by comparison the fall in the stream between the different gages. Tables of elevation of water-surface at some additional points in the drainage basin where records of discharge are maintained will be found in connection with the descriptions of the several discharge stations.

Occasionally apparent inconsistencies in the tables of water-surface elevation occur where the water level at an upstream gage is recorded slightly lower than at a point farther downstream, but are, as a rule, not the result of actual mistakes, but arise from the fact that most of the gages are read to the nearest tenth foot only, and also owing to the fact that the streams and lakes are sometimes affected by wind to such an extent as to cause the water-surface to be slightly higher at the downstream end of the level reach than at the upstream end.

The accompanying table gives details as to the types of gages used, the datum of each and the manner in which they are read.

Water-surface Elevation Gages Maintained on the Oneida River and Tributaries During the Year 1913

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to —
Oneida river:						
Three River Point	April 16, 1904	John Chamberlain	361.00	Staff	0.1 foot	0.1 foot.
Oak Orchard, below dam	April 23, 1904	Louis McArthur	361.12	Staff	0.1 "	0.1 "
Oak Orchard, above dam	Aug. 30, 1902	Louis McArthur	360.84	Staff	0.1 "	0.1 "
Caughdenoy, below dam	April 22, 1904	J. R. Hiller	362.93	Staff	0.1 "	0.1 "
Caughdenoy, above dam	April 22, 1904	J. R. Hiller	369.05	Staff	0.1 "	0.1 "
Brewerton	April 22, 1904	Geo. Heagle	367.06	Staff	0.1 "	0.1 "
Oneida Lake — Sylvan Beach	July 1, 1904	W. H. Dunn	368.00	Staff	0.1 "	0.1 "
Oneida creek:						
Kenwood, below dam	June 1, 1907	A. H. Mason	*	Staff	0.1 "	0.05 "
Kenwood, above dam	June 1, 1907	A. H. Mason	*	Staff	0.1 "	0.05 "
Butternut creek — Jamesville	July 25, 1907	Marie B. Brown	*	Chain	0.1 "	0.1 "
Limestone feeder — Fayetteville	Aug. 27, 1905	Chas. Goodfellow	423.82	Staff	0.1 "	0.1 "
Limestone creek:						
Fayetteville, above dam	Aug. 27, 1905	Chas. Goodfellow	429.53	Staff	0.1 "	0.1 "
Manlius	July 23, 1907	J. R. Bixby	*	Chain	0.1 "	0.1 "
Chittenango creek—Chittenango	May 22, 1901	O. D. Merwin	450.82	Staff	0.1 "	0.1 "

* Arbitrary datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River at Three River Point N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	363.70	366.00	364.80	367.60	364.20	363.70	363.60	362.40	362.90	362.50	363.60	364.20
2.....	363.80	365.80	364.80	367.40	364.20	363.70	363.60	362.30	362.70	362.40	363.60	364.10
3.....	365.00	365.70	364.60	367.30	364.10	363.70	363.60	362.10	362.50	361.90	363.70	364.00
4.....	365.70	365.50	364.60	367.40	364.30	363.70	363.70	361.50	362.80	362.00	363.60	364.00
5.....	366.00	365.10	364.50	366.90	364.30	363.70	363.70	362.00	363.00	362.40	363.70	363.90
6.....	366.20	364.90	364.50	366.60	364.10	363.80	363.80	362.30	362.70	362.40	363.70	363.80
7.....	366.40	364.80	364.50	366.60	364.00	363.80	363.70	361.90	362.70	362.30	363.60	364.00
8.....	366.40	364.70	364.90	366.50	363.90	363.70	363.70	361.60	362.60	362.50	363.50	364.00
9.....	366.40	364.80	......	366.30	364.00	363.80	363.40	361.90	362.60	362.40	363.60	364.20
10.....	366.30	364.80	365.00	366.20	364.10	363.70	363.30	362.20	362.70	362.40	363.70	364.20
11.....	366.40	364.70	364.90	366.10	364.00	363.60	363.30	362.50	362.50	362.40	363.80	364.20
12.....	366.50	364.70	365.00	366.00	364.00	363.80	363.30	362.80	362.50	362.50	363.80	364.10
13.....	366.50	365.00	365.10	365.90	363.90	364.00	363.90	363.00	362.50	362.70	363.90	364.20
14.....	366.50	365.00	365.30	365.90	363.80	364.10	363.60	362.90	362.50	362.70	363.90	364.20
15.....	366.40	365.00	365.50	366.00	363.90	364.00	363.30	362.80	362.50	362.90	363.90	364.30
16.....	366.50	365.20	365.70	365.40	364.00	363.90	363.30	363.00	361.90	362.80	364.00	364.20
17.....	366.60	365.20	365.90	365.60	363.90	363.80	363.30	363.10	362.00	362.90	364.10	364.20
18.....	366.70	365.10	365.90	365.40	364.00	363.90	363.30	363.30	362.00	362.90	364.00	364.10
19.....	367.00	365.10	365.80	365.20	363.90	363.70	363.10	363.20	362.50	362.90	364.00	364.00
20.....	367.20	365.00	365.50	365.10	364.00	363.70	363.20	363.10	362.60	362.20	364.10	363.90
21.....	367.30	365.00	365.40	365.00	364.00	363.80	363.40	363.10	362.70	362.70	364.10	363.90
22.....	367.40	364.90	365.20	364.70	364.10	363.80	363.30	363.00	363.00	363.00	364.20	364.00
23.....	367.40	365.20	365.00	364.60	364.00	363.70	363.10	363.00	363.00	363.20	364.40	364.10
24.....	367.50	365.10	364.80	364.60	363.50	363.40	363.00	362.90	362.80	363.60	364.30	364.10
25.....	367.60	365.00	365.00	364.40	363.90	363.60	362.90	363.10	362.80	363.20	364.20	364.10
26.....	367.60	365.00	365.70	364.40	363.80	363.70	362.70	363.00	362.70	363.70	364.20	364.10
27.....	367.40	364.90	366.20	364.40	363.80	363.60	362.70	363.00	362.60	363.90	364.20	364.00
28.....	367.20	364.80	366.60	364.30	364.00	363.70	363.20	362.80	362.70	363.90	364.10	363.80
29.....	366.90	......	367.10	364.20	364.00	363.80	362.90	362.80	362.80	363.80	364.10	364.10
30.....	366.70	......	367.30	364.10	363.90	363.70	362.50	362.80	362.60	363.70	364.20	363.90
31.....	366.40	......	367.60	......	363.80	......	362.40	363.00	......	363.70	......	363.09

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River below Dam at Oak Orchard, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	364.77	368.22	364.87	369.07	364.42	364.92	363.32	362.22	362.42	362.32	363.32	363.92
2.....	365.22	368.07	364.57	368.97	364.37	364.87	363.27	362.22	362.42	362.27	363.37	363.82
3.....	365.57	368.02	364.37	368.77	364.32	364.77	363.22	362.22	362.42	362.22	363.32	363.82
4.....	365.87	367.97	364.22	368.47	364.27	364.62	363.22	362.07	362.32	362.22	363.32	363.82
5.....	366.07	367.92	364.12	368.27	364.32	364.57	363.22	362.02	362.32	362.22	363.37	363.82
6.....	366.22	367.77	364.17	368.07	364.32	364.37	363.17	362.02	362.32	362.22	363.42	363.82
7.....	366.32	367.57	364.32	368.02	364.32	364.22	363.32	361.92	362.32	362.22	363.52	363.82
8.....	366.67	367.47	364.32	367.97	364.27	364.07	363.32	361.87	362.32	362.27	363.52	363.87
9.....	367.02	367.42	364.67	367.82	364.22	364.02	363.22	361.82	362.42	362.52	363.57	363.92
10.....	367.42	367.27	364.77	367.77	364.02	364.02	363.17	361.82	332.62	362.57	363.82	363.97
11.....	368.02	367.12	364.97	367.42	363.97	363.92	363.17	361.87	362.62	362.62	353.82	363.97
12.....	368.27	366.87	365.17	367.22	363.92	363.77	363.12	361.92	362.52	362.57	363.72	363.92
13.....	368.22	366.67	365.42	367.07	363.82	363.62	363.07	362.02	362.52	362.57	363.72	363.97
14.....	368.22	366.47	365.52	367.02	363.82	363.62	363.02	362.02	362.42	362.62	363.77	364.12
15.....	368.22	366.42	365.72	366.92	363.72	363.62	362.97	362.07	362.42	362.72	363.87	364.12
16.....	368.27	366.22	366.07	366.77	363.77	363.62	362.82	362.22	362.32	362.72	363.82	364.07
17.....	368.32	366.17	366.17	366.47	363.82	363.57	362.82	362.22	362.22	362.77	363.87	364.12
18.....	368.32	366.07	366.12	366.02	363.77	363.52	362.82	362.27	362.12	362.87	364.02	364.02
19.....	368.32	365.97	366.12	365.77	363.82	363.42	362.72	362.32	362.12	362.92	364.02	364.02
20.....	368.37	365.77	366.07	365.52	363.82	363.37	362.67	363.32	362.02	363.02	363.97	364.02
21.....	368.42	365.52	365.92	365.47	363.82	363.22	362.62	362.22	362.02	363.02	363.92	363.92
22.....	368.42	365.52	365.82	365.37	363.82	363.22	362.62	362.22	362.22	363.12	363.97	363.87
23.....	368.32	365.47	365.77	365.07	363.82	363.27	362.52	362.22	362.32	363.12	364.12	363.92
24.....	368.17	365.37	365.82	364.87	363.82	363.42	362.42	362.42	362.42	363.12	364.12	363.92
25.....	368.12	365.12	366.32	364.67	364.17	363.42	362.42	362.52	362.42	363.12	364.07	363.92
26.....	368.02	365.07	367.02	364.52	364.32	363.47	362.32	362.52	362.42	363.12	364.02	363.92
27.....	368.02	364.92	367.67	364.47	364.47	363.52	362.32	362.47	362.32	363.07	364.02	353.92
28.....	367.97	364.92	368.52	364.42	364.52	363.52	362.32	362.42	362.32	363.12	364.02	363.92
29.....	367.97	......	369.22	364.47	364.57	363.42	362.22	362.47	362.32	363.22	363.92	363.92
30.....	368.22	......	369.32	364.42	364.72	363.32	362.17	362.42	362.22	363.22	363.92	363.92
31.....	368.27	......	369.27	......	364.92	......	362.12	362.42	......	363.32	......	363.92

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River above Dam at Oak Orchard, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.*a*	Aug.*a*	Sept.*a*	Oct.*a*	Nov.*a*	Dec.*a*
1913.												
1.....	367.89	369.14	366.59	369.99	367.04	366.24	......	......	......	......	......	......
2.....	368.09	369.09	366.44	369.84	366.99	366.24	......	......	......	......	......	......
3.....	368.29	369.14	366.39	369.79	366.84	366.19	......	......	......	......	......	......
4.....	368.54	369.09	366.34	369.69	366.74	366.09	......	......	......	......	......	......
5.....	368.79	369.04	366.34	369.54	366.74	365.89	......	......	......	......	......	......
6.....	369.04	368.79	366.29	369.49	366.74	365.84	......	......	......	......	......	......
7.....	369.09	368.74	366.24	369.44	366.69	365.84	......	......	......	......	......	......
8.....	369.29	368.74	366.14	369.34	366.64	365.69	......	......	......	......	......	......
9.....	369.59	368.49	366.19	369.34	366.54	365.64	......	......	......	......	......	......
10.....	369.74	368.44	366.24	369.29	366.44	365.59	......	......	......	......	......	......
11.....	369.74	368.44	366.49	369.09	366.39	365.49	......	......	......	......	......	......
12.....	369.64	368.34	366.89	368.94	366.39	365.34	......	......	......	......	......	......
13.....	369.59	368.29	367.44	368.89	366.19	365.24	......	......	......	......	......	......
14.....	369.59	368.14	367.69	368.84	366.04	365.24	......	......	......	......	......	......
15.....	369.79	368.04	367.89	368.84	366.04	365.14	......	......	......	......	......	......
16.....	369.84	367.94	368.19	368.79	365.99	364.99	......	......	......	......	......	......
17.....	369.79	367.84	368.44	368.44	365.84	364.84	......	......	......	......	......	......
18.....	369.79	367.84	368.34	368.34	365.84	364.84	......	......	......	......	......	......
19.....	369.94	367.84	368.09	368.24	365.79	*a*	......	......	......	......	......	......
20.....	369.94	367.79	367.84	368.24	365.74	*a*	......	......	......	......	......	......
21.....	369.99	367.79	367.84	368.24	365.69	*a*	......	......	......	......	......	......
22.....	370.19	367.94	367.94	368.24	365.64	*a*	......	......	......	......	......	......
23.....	370.24	367.84	368.24	368.14	365.54	*a*	......	......	......	......	......	......
24.....	370.09	367.74	368.59	367.79	365.54	*a*	......	......	......	......	......	......
25.....	370.04	367.49	368.99	367.64	365.54	*a*	......	......	......	......	......	......
26.....	369.84	367.24	369.44	367.59	365.54	*a*	......	......	......	......	......	......
27.....	369.79	366.89	369.79	367.39	365.54	*a*	......	......	......	......	......	......
28.....	369.64	366.79	370.04	367.34	365.64	*a*	......	......	......	......	......	......
29.....	369.64	......	370.29	367.34	366.04	*a*	......	......	......	......	......	......
30.....	369.59	......	370.34	367.24	366.24	*a*	......	......	......	......	......	......
31.....	369.34	......	370.14	......	366.34	*a*	......	......	......	......	......	......

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River below Dam at Caughdenoy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	368.33	370.53	367.23	370.83	367.23	365.83	363.13	363.07	363.23	363.38	363.48	364.28
2.....	368.43	370.33	367.13	370.63	367.03	365.73	363.13	363.03	363.18	363.31	362.93	364.18
3.....	368.53	370.33	367.23	370.83	366.93	365.63	363.13	363.03	363.16	363.13	363.98	364.18
4.....	368.23	370.13	367.13	370.63	366.93	365.53	363.23	363.09	363.28	363.28	363.73	364.13
5.....	368.43	369.93	367.03	370.43	366.83	365.53	363.13	363.08	363.18	363.33	362.93	364.08
6.....	368.53	369.93	366.93	370.43	366.63	365.43	362.93	363.07	363.28	363.35	364.03	364.18
7.....	368.73	370.03	366.93	370.53	366.53	365.43	362.93	363.08	363.28	363.41	363.98	364.23
8.....	369.33	370.13	366.83	370.03	366.33	365.33	363.93	363.03	363.23	363.38	364.08	364.18
9.....	369.63	369.83	366.93	369.93	366.03	365.23	363.93	363.09	363.33	363.28	364.03	364.23
10.....	369.93	369.63	367.03	370.03	365.83	365.13	363.13	363.08	363.33	363.33	364.05	364.28
11.....	370.13	369.43	367.13	379.33	365.73	365.03	363.13	363.08	363.23	363.23	364.13	364.28
12.....	370.13	369.13	367.33	369.83	365.73	365.03	363.03	363.09	363.13	363.38	364.15	364.33
13.....	370.23	368.73	367.43	369.63	365.63	365.13	363.93	363.03	363.43	363.23	364.18	364.30
14.....	370.33	368.43	367.63	369.53	365.63	365.03	363.13	363.09	363.03	363.23	364.13	364.28
15.....	370.33	368.03	367.83	369.43	365.73	364.93	363.13	363.10	363.16	363.33	364.15	364.25
16.....	370.23	367.93	368.13	369.13	365.63	365.03	363.13	363.10	363.13	363.28	364.13	364.23
17.....	370.53	367.83	368.33	369.03	365.53	364.93	363.13	363.09	363.13	363.33	364.15	364.28
18.....	370.73	367.53	368.63	368.83	365.43	364.53	363.23	363.08	363.18	363.28	364.13	364.25
19.....	370.43	367.43	368.93	368.53	365.33	364.43	363.23	363.07	363.08	363.28	364.18	364.30
20.....	370.53	367.43	369.03	368.23	365.33	364.13	363.23	363.07	363.23	363.38	364.20	364.33
21.....	370.53	367.43	369.13	368.43	365.63	363.63	363.13	363.08	363.28	363.30	364.18	364.25
22.....	370.63	367.53	369.13	368.33	365.43	363.33	363.23	363.07	363.18	363.68	364.28	364.23
23.....	370.73	367.53	369.23	368.23	365.33	363.23	363.23	363.08	363.13	363.78	363.88	364.48
24.....	370.93	367.43	369.33	368.03	365.23	363.13	363.33	363.08	363.18	363.83	364.28	364.18
25.....	370.83	367.43	369.43	368.93	365.23	363.13	363.43	363.09	363.23	363.83	364.18	364.23
26.....	370.73	367.33	369.93	367.83	365.33	363.23	363.43	363.10	363.13	363.88	364.28	364.08
27.....	370.43	367.23	370.83	367.83	365.53	363.23	363.53	363.10	363.43	362.98	364.33	364.18
28.....	370.43	367.23	370.93	367.73	365.83	363.13	363.63	363.11	363.23	362.98	364.53	364.08
29.....	370.53	......	371.23	367.63	365.83	363.23	363.73	363.11	363.13	362.98	364.28	364.08
30.....	370.43	......	371.73	367.43	365.73	363.13	363.83	363.11	363.23	362.93	364.33	364.10
31.....	370.43	......	371.53	......	365.73	......	363.93	363.12	......	363.83	......	364.10

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River above Dam at Caughdenoy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	370.90	371.75	370.95	372.45	371.25	370.65	370.20	369.65	369.24	369.30	369.15	369.85
2.....	371.00	371.65	370.95	372.65	371.25	370.67	370.15	369.63	369.23	369.32	369.25	369.75
3.....	371.05	371.65	371.00	372.75	371.15	370.67	370.15	369.73	369.22	369.34	369.35	369.65
4.....	370.85	371.55	370.95	372.65	371.10	370.65	370.20	369.65	369.23	369.32	369.15	369.65
5.....	371.05	371.45	370.90	372.45	371.10	370.63	370.15	369.70	369.24	369.32	369.25	369.55
6.....	371.15	371.45	370.85	372.55	371.05	370.63	369.75	369.65	369.25	369.25	369.25	369.55
7.....	371.35	371.35	370.75	372.45	370.95	370.50	369.85	369.65	369.25	369.25	369.25	369.85
8.....	371.45	371.35	370.65	372.45	370.85	370.50	370.05	369.63	369.23	369.32	369.35	369.65
9.....	371.65	371.25	370.70	372.45	370.80	370.48	370.10	369.65	369.22	369.25	369.25	369.95
10.....	371.65	371.25	370.75	372.55	370.70	370.48	370.50	369.63	369.21	369.35	369.15	370.05
11.....	371.75	371.15	370.75	372.65	370.68	370.43	370.00	369.63	369.22	369.35	369.35	370.05
12.....	371.65	371.15	370.85	372.35	370.70	370.45	370.00	369.65	369.20	369.25	369.35	369.95
13.....	371.75	371.25	371.00	372.25	370.65	370.50	370.10	369.60	369.20	369.25	369.55	369.95
14.....	371.75	371.15	371.05	372.15	370.65	370.40	369.85	369.60	369.19	369.15	369.55	369.95
15.....	371.65	371.05	371.25	372.05	370.63	370.37	369.83	369.50	369.18	369.15	369.65	369.85
16.....	371.55	371.05	371.55	371.95	370.60	370.40	369.83	369.50	369.19	369.15	369.65	369.85
17.....	371.75	371.15	371.65	371.95	370.63	370.30	369.83	369.47	369.20	369.14	369.75	369.85
18.....	371.85	371.05	371.85	371.85	370.55	370.35	369.80	369.45	369.21	369.15	369.65	369.75
19.....	371.95	371.05	371.65	371.55	370.35	370.40	369.80	369.40	369.21	369.25	369.75	369.85
20.....	372.05	370.95	371.65	371.65	370.45	370.30	369.83	369.55	369.22	369.25	369.75	369.85
21.....	372.05	370.90	371.75	371.55	370.45	370.32	369.83	369.45	369.22	369.15	369.85	369.85
22.....	372.15	370.95	371.85	371.65	370.45	370.25	369.80	369.55	369.22	369.12	369.85	369.75
23.....	372.25	370.95	371.75	371.55	370.55	370.25	369.85	369.25	369.21	369.07	369.75	370.15
24.....	372.15	371.00	371.85	371.55	370.50	370.25	369.80	369.45	369.21	369.07	369.95	369.75
25.....	372.05	370.95	371.95	371.45	370.50	370.30	369.80	369.45	369.23	369.07	369.85	369.85
26.....	371.95	371.00	372.05	371.45	370.55	370.25	369.83	369.55	369.25	369.05	369.85	369.95
27.....	371.85	370.95	372.45	371.40	370.70	370.23	369.77	369.45	369.27	369.55	369.95	370.35
28.....	372.05	370.90	372.75	371.35	370.65	370.20	369.70	369.35	369.25	369.65	370.15	370.15
29.....	372.15	......	373.05	371.25	370.70	370.27	369.65	369.35	369.27	369.45	369.85	370.05
30.....	372.05	......	373.45	371.15	370.65	370.20	369.70	369.45	369.28	369.35	369.95	369.85
31.....	371.85	......	373.15	......	370.65	......	369.80	369.40	......	369.25	......	369.75

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River at Brewerton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	371.26	373.06	371.26	374.66	371.96	370.86	370.36	369.86	369.36	369.56	370.46	370.66
2.....	371.26	372.86	371.26	374.66	371.86	370.86	370.36	369.86	369.36	369.56	370.46	370.66
3.....	371.26	372.66	371.26	374.56	371.76	370.86	370.36	369.76	369.36	369.56	370.46	370.66
4.....	371.26	372.56	371.26	374.46	371.76	370.96	370.26	369.76	369.36	369.56	370.46	370.66
5.....	371.36	372.56	371.26	374.36	371.66	370.96	370.26	369.76	369.36	369.56	370.46	370.66
6.....	371.56	372.46	371.26	374.36	371.56	370.96	370.26	369.76	369.36	369.56	370.46	370.66
7.....	371.66	372.26	371.26	374.26	371.46	370.96	370.26	369.76	369.36	369.56	370.46	370.66
8.....	371.86	372.16	371.16	374.26	371.36	370.86	370.16	369.76	369.36	369.56	370.46	370.66
9.....	372.06	372.16	371.06	374.16	371.26	370.86	370.16	369.76	369.36	369.56	370.46	370.66
10.....	372.26	372.06	371.06	374.16	371.16	370.76	370.16	369.66	369.36	369.56	370.46	370.76
11.....	372.46	372.06	371.06	374.06	371.16	370.66	370.06	369.66	369.36	369.56	370.46	370.76
12.....	372.66	371.96	371.16	373.86	371.06	370.56	370.06	369.66	369.36	369.56	370.56	370.76
13.....	372.86	371.86	371.36	373.86	371.06	370.56	370.06	369.66	369.36	369.66	370.56	370.76
14.....	372.86	371.76	371.66	373.76	371.06	370.56	370.06	369.66	369.36	369.66	370.56	370.76
15.....	372.86	371.76	371.96	373.56	371.06	370.56	370.06	369.66	369.36	369.66	370.56	370.76
16.....	372.96	371.76	372.26	373.36	370.96	370.56	370.06	369.66	369.36	369.66	370.56	370.66
17.....	372.96	371.66	372.46	373.16	370.96	370.56	370.06	369.66	369.36	369.66	370.56	370.63
18.....	373.06	371.56	372.66	373.06	370.96	370.56	370.06	369.66	369.36	369.76	370.66	370.66
19.....	373.36	371.46	372.76	372.86	370.96	370.56	370.06	369.56	369.36	369.76	370.66	370.66
20.....	373.56	371.46	372.76	372.86	370.96	370.56	369.96	369.56	369.36	369.76	370.66	370.66
21.....	373.66	371.46	372.86	372.76	370.96	370.46	369.96	369.56	369.46	369.86	370.70	370.66
22.....	373.66	371.36	372.96	372.66	370.96	370.46	369.96	369.46	369.46	369.86	370.70	370.66
23.....	373.76	371.36	372.96	372.56	370.86	370.46	369.96	369.46	369.46	369.96	370.60	370.66
24.....	373.76	371.36	372.96	372.56	370.86	370.36	369.86	369.46	369.56	370.06	370.60	370.66
25.....	373.66	371.36	373.06	372.46	370.86	370.36	369.86	369.46	369.56	370.16	370.60	370.66
26.....	373.66	371.36	373.66	372.36	370.86	370.36	369.86	369.46	369.56	370.16	370.60	370.66
27.....	373.56	371.36	374.06	372.36	370.86	370.36	369.86	369.46	369.56	370.16	370.60	370.63
28.....	373.46	371.26	374.66	372.26	370.86	370.36	369.86	369.46	369.56	370.26	370.60	370.66
29.....	373.46	......	375.06	372.16	370.86	370.36	369.86	369.46	369.56	370.26	370.60	370.66
30.....	373.56	......	374.86	372.06	370.86	370.36	369.86	369.36	369.56	370.26	370.60	370.66
31.....	373.56	......	374.66	......	370.86	......	369.86	369.36	......	370.36	......	370.66

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida Lake at Sylvan Beach, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	371.40	373.10	371.50	377.00	372.00	370.10	370.70	369.90	369.40	369.60	370.80	370.70
2.....	371.50	373.00	371.50	374.70	372.00	370.20	370.70	370.00	369.40	369.60	370.50	370.70
3.....	371.50	373.00	371.50	374.70	372.00	370.30	370.70	370.00	369.40	369.60	370.40	370.70
4.....	271.70	373.00	371.50	374.70	371.90	370.20	370.70	369.80	369.40	369.60	370.40	370.70
5.....	371.90	373.00	371.50	374.50	371.80	370.20	370.80	369.80	369.40	369.60	370.40	370.70
6.....	372.30	372.80	371.40	374.40	371.70	370.40	370.70	369.80	369.40	369.70	370.40	370.80
7.....	372.50	372.70	371.40	374.00	371.70	370.50	370.70	369.80	369.30	369.70	370.40	370.90
8.....	372.90	372.50	371.40	373.80	371.60	370.60	370.70	369.80	369.40	369.80	370.30	371.00
9.....	372.90	372.50	371.50	373.70	371.60	370.60	370.60	369.80	369.40	369.80	370.30	370.90
10.....	373.00	372.40	371.50	373.20	371.50	370.60	370.60	369.70	369.30	369.80	370.40	370.90
11.....	373.20	372.40	371.50	373.10	371.50	370.70	370.50	369.70	369.30	369.80	370.50	370.90
12.....	373.20	372.40	371.50	373.00	371.40	370.70	370.50	369.60	369.30	369.70	370.60	370.80
13.....	373.20	372.30	371.60	373.50	371.40	370.60	370.40	369.60	369.30	369.60	370.60	370.80
14.....	373.20	372.30	371.90	373.50	371.40	370.50	370.30	369.50	369.30	369.70	370.60	370.80
15.....	373.00	372.30	372.80	373.50	371.30	370.50	370.10	369.50	369.30	369.80	370.60	370.80
16.....	372.90	372.30	373.00	373.40	371.30	370.40	370.00	369.50	369.40	369.80	370.60	370.80
17.....	372.90	372.00	372.90	373.40	371.30	370.40	370.00	369.50	369.50	369.80	370.70	370.90
18.....	373.50	372.00	372.90	373.35	371.20	370.40	369.90	369.50	369.50	369.80	370.70	370.90
19.....	373.50	372.00	372.90	373.30	371.10	370.30	369.90	369.50	369.50	369.80	370.70	370.90
20.....	373.60	371.60	372.80	373.30	371.00	370.30	369.90	369.40	369.50	369.90	370.80	370.80
21.....	373.80	371.60	372.90	373.30	371.00	370.30	369.80	369.40	369.50	370.00	370.80	370.70
22.....	374.00	371.50	372.80	373.00	371.00	370.40	369.80	369.40	369.50	370.00	370.90	370.70
23.....	374.00	371.40	372.70	373.00	369.90	370.50	369.80	369.40	369.50	370.20	370.90	370.70
24.....	374.00	371.40	373.00	372.90	369.90	370.50	369.80	369.40	369.50	370.30	370.90	370.60
25.....	374.10	371.40	373.00	372.50	370.00	370.50	369.70	369.50	369.60	370.30	370.80	370.60
26.....	374.00	371.40	373.00	372.20	370.00	370.60	369.70	369.50	369.60	370.40	370.80	370.60
27.....	373.90	371.40	374.00	372.00	370.60	370.70	369.70	369.50	369.60	370.40	370.80	370.60
28.....	373.80	371.50	376.40	372.00	370.10	370.80	369.70	369.50	369.60	370.40	370.70	370.60
29.....	373.60	......	376.80	372.00	370.00	370.80	369.80	369.50	369.60	370.50	370.70	370.50
30.....	373.20	......	376.90	372.00	370.00	370.80	369.90	369.40	369.60	370.60	370.70	370.50
31.....	373.20	......	377.00	......	370.00	......	370.00	369.40	......	370.70	......	370.50

ONEIDA RIVER AT CAUGHDENOY, N. Y.

A masonry dam was completed across the Oneida river at Caughdenoy during the summer of 1909. This dam has a substantially level crest 415 feet in length. The crest is at elevation 369.4 and has an ogee cross-section with a slope, or batter, on the upstream portion of the crest of 1 foot rise in 2 feet horizontal width. The downstream portion of the crest is rounded with a radius of 3.24 feet.

The gage is located about 150 feet upstream from the dam, on the right-hand side of the stream. The channel at this point is about 350 feet in width, average bottom elevation being 365.0. The discharge from the dam has been calculated from United States Geological Survey experiments on an ogee cross-section similar in form, and an allowance has been made for velocity of approach. During the summer season and also to some extent during the winter season water is diverted past the left-hand end of the dam through the Caughdenoy lock. An estimate of the amount of diversion has been made and included in the calculated discharge of the river.

Mean Daily Discharge, Second-feet, of Oneida River at Caughdenoy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	2,737	5,696	2,922	7,979	3,891	2,072	1,019	172	......	......	......	412
2	3,106	5,322	2,922	8,583	3,891	2,122	926	151	......	......	......	283
3	3,258	5,322	3,106	8,836	3,570	2,122	926	259	......	......	......	172
4	2,600	4,958	2,922	8,583	3,411	2,072	1,019	172	......	......	......	172
5	3,258	4,584	2,737	7,979	3,411	2,021	926	222	......	......	......	82
6	3,570	4,584	2,600	8,281	3,258	2,021	283	172	......	......	......	82
7	4,222	4,222	2,330	7,979	2,922	1,703	412	172	......	......	......	412
8	4,584	4,222	2,072	7,979	2,600	1,703	746	151	......	......	......	172
9	5,322	3,891	2,198	7,979	2,463	1,648	832	172	......	......	......	570
10	5,322	3,891	2,330	8,281	2,198	1,648	1,703	151	......	......	......	746
11	5,696	3,570	2,330	8,583	2,147	1,512	659	151	......	......	......	746
12	5,322	3,570	2,600	7,700	2,198	1,566	659	172	......	......	......	570
13	5,696	3,891	3,106	7,400	2,072	1,703	832	121	......	......	82	570
14	5,696	3,570	3,258	7,064	2,072	1,430	412	121	......	......	82	570
15	5,322	3,258	3,891	6,738	2,021	1,367	385	43	......	......	172	412
16	4,958	3,258	4,958	6,496	1,945	1,430	385	43	......	......	172	412
17	5,696	3,570	5,322	6,496	2,021	1,219	385	30	......	......	283	412
18	6,082	3,258	6,082	6,082	1,824	1,324	344	22	......	......	172	283
19	6,496	3,258	5,322	4,958	1,324	1,430	344	......	......	......	283	412
20	6,738	2,922	5,322	5,322	1,566	1,219	385	82	......	......	283	412
21	6,738	2,737	5,696	4,958	1,566	1,261	385	22	......	......	412	412
22	7,064	2,922	6,082	5,322	1,566	1,119	344	82	......	......	412	283
23	7,400	2,922	5,696	4,958	1,824	1,119	412	......	......	......	283	926
24	7,064	3,106	6,082	4,958	1,703	1,119	344	22	......	......	570	283
25	6,738	2,922	6,496	4,584	1,703	1,219	344	22	......	......	412	412
26	6,496	3,106	6,738	4,584	1,824	1,119	385	82	......	......	412	570
27	6,082	2,922	7,979	4,389	2,198	1,079	307	22	......	82	570	1,324
28	6,738	2,737	8,836	4,222	2,072	1,019	222	......	......	172	926	926
29	7,064	......	9,640	3,891	2,198	1,159	172	......	......	22	412	746
30	6,738	......	10,721	3,570	2,072	1,019	222	22	......	......	570	412
31	6,082	......	9,923	......	2,072	......	344	......	......	......	......	283
Mean	5,480	3,721	4,910	6,491	2,310	1,485	550	110	......	......	362	467

Monthly Discharge of Oneida River at Caughdenoy, N. Y.

[Drainage area, 1,377 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	7,400	2,600	5,480	3.98	4.59
February	5,696	2,737	3,721	2.70	2.81
March	10,721	2,072	4,910	3.57	4.12
April	8,836	3,570	6,491	4.71	5.26
May	3,891	1,324	2,310	1.68	1.94
June	2,072	1,019	1,485	1.08	1.21
July	1,703	172	550	0.399	0.46
August	259	22	110	0.08	0.09
September	....	....	....	....	....
October	172	22	....	....	....
November	926	82	362	0.263	0.303
December	1,324	82	467	0.339	0.391

CHITTENANGO CREEK DRAINAGE BASIN.

DESCRIPTION.

Chittenango creek is the principal tributary of Oneida lake from the south. It comprises three main branches: Butternut creek, Limestone creek and Chittenango creek proper. The three branches join near North Manlius. Above the junction of Butternut creek, Chittenango creek flows through an irregular dumbbell-shaped area extending in a northwest and southeast direction. This area lies chiefly in the dissected, hilly region south of the line of the New York Central railroad. The length of the basin is about 22 miles. Its width in the upper portion is 9 miles; in the middle portion, 4 miles; in the lower portion, 7 miles. The drainage basin is deeply rolling, mostly cleared and has a heavy, impervious soil with extensive sodded-meadow areas. The soil is underlaid by shale rock, often outcropping, and affording numerous springs. The stream tributaries are somewhat sparse. Marsh and swamp areas are very limited, with the exception of the Nelson swamp, about two square miles in area.

There were formerly several water-powers in use in the deep narrow valley between Chittenango falls and Chittenango. The outflow from Cazenovia lake is regulated and there is also a reservoir at Erieville. These reservoirs are used to supply the summit level of the Erie canal. The capacities of these reservoirs are given as follows in New York State Barge Canal Report for 1901, page 663:

Erieville Reservoir.

Storage capacity	318,424 cubic feet
Tributary drainage area	5.4 square miles
Water-surface	340 acres

Cazenovia Lake.

Tributary drainage area	8.7 square miles
Storage capacity	206,997 cubic feet
Water-surface	1.7 square miles

The head of the stream is near Erieville reservoir, which is formed by a dam crossing a small stream valley, formerly tributary to Chenango river through Eaton brook. Results of gagings of Chittenango creek at Bridgeport, where the stream debouches into Oneida lake, may be found in the report of the State Engineer and Surveyor for 1902, supplement, pages 57–61. Cazenovia lake is located 10 miles below Erieville reservoir, which is at the head of the stream at elevation 1,190. From its outlet to the foot of the plateau at Erie canal crossing the stream descends 770 feet, the distance, following the general trend of the valley, being 11 miles. At Chittenango falls there occurs a precipitous descent of about 100 feet.

CHITTENANGO CREEK AT CHITTENANGO, N. Y.

A current-meter gaging station was established at Main street highway bridge in Chittenango village, May 22, 1901, by R. E. Horton, for the U. S. Geological Survey, by which it was maintained until July 9, 1905, when it was transferred to the care of this Department. Current-meter measurements have been taken and rating table made, from which the accompanying tables have been computed.

The stream at this point is entrained between parallel walls, affording a channel 50 feet wide, over which the bridge passes at a single span. The bridge stands at an angle to the thread of the stream, and has a span between abutments of 57 feet. The gage board is secured in a vertical position to the right abutment on the upstream side, and reads decimally from 0 to 8 feet. The stage of the stream is observed twice daily by the gage-reader, Bessie M. Kellogg. The bench-mark is on the upstream corner of the coping of the right-hand bridge abutment.

Elevation, bench-mark	458.39
Elevation, gage zero	450.16

The gaging station is one-half mile above the State dam, diverting water for the supply of the summit level of Erie canal. The freshet of December 15, 1901, changed the cross-section of the stream at the gaging station. Separate rating curves have been prepared for the periods preceding and following that date.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Chittenango Creek at Chittenango, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	451.92	452.32	451.92	452.87	451.82	451.62	451.42	451.42	451.22	451.22	451.42	451.42
2.....	451.92	451.72	451.92	452.57	451.77	451.87	451.42	451.27	451.37	451.37	451.42	451.52
3.....	453.12	451.92	451.92	452.32	451.77	451.72	451.47	451.27	451.37	451.32	451.42	451.57
4.....	452.57	451.92	451.82	452.37	451.77	451.62	451.42	451.52	451.22	451.32	451.42	451.47
5.....	452.22	452.02	451.82	452.27	451.72	451.57	451.32	451.17	451.32	451.22	451.47	451.47
6.....	452.52	452.12	451.72	452.32	451.72	451.62	451.42	451.27	451.12	451.32	451.42	451.37
7.....	452.77	452.02	451.77	452.27	451.77	451.87	451.37	451.37	451.37	451.37	451.47	451.47
8.....	453.22	451.97	451.62	452.22	451.67	451.62	451.42	451.42	451.17	451.27	451.47	451.57
9.....	452.72	452.12	452.17	452.17	451.62	451.57	451.32	451.47	451.27	451.22	451.52	451.37
10.....	452.42	452.02	452.37	452.07	451.62	451.62	451.37	451.47	451.27	451.37	452.07	451.42
11.....	452.72	451.87	432.77	452.82	451.62	451.42	451.47	451.32	451.27	451.37	451.62	451.47
12.....	453.12	451.87	452.72	452.62	451.62	451.47	451.42	451.32	451.32	451.52	451.52	451.47
13.....	452.42	451.72	452.62	452.22	451.57	451.52	451.47	451.42	451.32	451.47	451.47	451.47
14.....	452.12	451.82	453.22	452.22	451.42	451.52	451.47	451.47	451.27	451.32	451.62	451.47
15.....	452.17	451.97	453.02	452.12	451.52	451.47	451.37	451.42	451.37	451.32	451.62	451.52
16.....	452.42	452.02	452.52	452.17	451.52	451.42	451.42	451.52	451.27	451.27	451.52	451.37
17.....	453.12	451.72	452.22	452.07	451.52	451.52	451.42	451.42	451.32	451.27	451.52	451.42
18.....	453.12	452.12	452.22	451.92	451.62	451.42	451.42	451.47	451.37	451.37	451.52	451.37
19.....	452.92	452.02	452.12	452.42	451.57	451.52	451.42	451.47	451.32	451.37	451.52	451.32
20.....	452.57	452.07	452.02	452.17	451.47	451.42	451.47	451.27	451.17	451.92	451.72	451.47
21.....	452.42	452.02	452.22	452.12	451.42	451.72	451.47	451.37	451.47	452.02	451.62	451.37
22.....	452.62	452.22	452.12	451.82	451.42	451.62	451.42	451.42	451.77	451.47	451.52	451.37
23.....	452.47	452.22	452.17	451.72	451.62	451.42	451.42	451.37	451.62	451.42	451.47	451.32
24.....	452.77	452.12	451.97	451.77	451.72	451.42	451.47	451.37	451.37	451.42	451.52	451.57
25.....	452.32	452.02	454.57	451.72	451.52	451.62	451.42	451.27	451.27	451.27	451.52	451.52
26.....	452.32	452.12	454.57	451.72	451.47	451.57	451.42	451.27	451.32	451.42	451.47	451.57
27.....	452.37	452.02	454.47	451.72	451.57	451.52	451.42	451.37	451.27	451.47	451.42	451.92
28.....	452.42	452.02	453.67	451.92	452.12	451.47	451.37	451.22	451.32	451.52	451.52	451.87
29.....	452.17	......	453.37	451.92	451.87	451.42	451.32	451.57	451.07	451.47	451.42	451.57
30.....	452.22	......	452.92	451.82	451.72	451.42	451.42	451.37	451.22	451.37	451.42	451.57
31.....	452.32	......	452.92	......	451.62	......	451.32	451.47	......	451.42	.....	451.52

BUTTERNUT CREEK.

DESCRIPTION.

The head waters of Butternut creek lie at elevation 1,700 feet, near the south line of Onondaga county. This stream drains a narrow basin about 24 miles in length and having an average width of about 3 miles. The stream flows in a southerly direction. Jamesville reservoir is located 14 miles below the source at elevation about 640. North of Erie canal the stream flows out into the flat lands, at elevation about 400, which border Oneida lake for a width of several miles. Butternut creek is joined by Limestone creek near North Manlius at a point about 1½ miles above its junction with Chittenango creek. Erie canal crosses the stream 4½ miles below Jamesville. Above Erie canal crossing the slopes are steep and the tributaries are mostly short laterals. Jamesville reservoir has a capacity of 170,000,000 cubic feet. The water-surface area is 252 acres. At a distance of 2.35 miles below Jamesville is a dam which diverts part of the stream to the Orrville feeder. This feeder is 2.25 miles in length.

BUTTERNUT CREEK NEAR JAMESVILLE, N. Y.

A gaging station was established on Butternut creek at the first bridge above the head of the Orrville feeder, July 25, 1907, by Robert E. Horton, for this Department. The gage is located about 2 miles below Jamesville, and measurements at this point will show the supply to the canal available from Jamesville reservoir and the Orrville feeder. A box-and-chain gage is bolted to the hand-rail of the bridge on the upstream side. The gage scale reads from zero to 7.5 feet, and the length of the chain is 13.00 feet. The current-meter measurements are made from the downstream side of the bridge, using the face of the right-hand abutments as an initial point. The bridge is subdivided at two-foot intervals and the span is 40 feet. The gage is read at 7 A. M. and 6 P. M. by Marie Brandt Brown.

Mean Daily Gage Height, in Feet, of Butternut Creek near Jamesville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	2.00	2.10	1.60	4.65	2.30	1.85	1.30	1.20	1.30	1.80	2.00	1.90
2.....	2.50	2.05	1.60	4.65	2.30	1.85	1.30	1.20	1.30	1.80	1.95	1.90
3.....	3.50	2.00	1.60	4.50	2.30	1.75	1.30	1.20	1.35	1.80	1.95	1.90
4.....	3.50	2.00	1.60	4.35	2.25	1.75	1.30	1.20	1.40	1.75	1.90	1.85
5.....	3.25	2.00	1.70	4.25	2.25	1.75	1.40	1.10	1.40	1.85	1.90	1.80
6.....	3.25	2.05	1.75	3.25	2.20	1.70	1.30	1.05	1.60	1.85	1.95	1.85
7.....	3.50	2.00	1.60	2.65	2.20	1.70	1.30	1.05	1.80	1.80	1.90	1.90
8.....	3.50	2.00	1.60	2.85	2.20	1.70	1.30	1.00	1.80	1.80	1.95	1.90
9.....	3.75	2.00	1.80	2.55	2.20	1.65	1.25	1.00	1.80	1.90	1.90	2.00
10.....	4.25	2.10	1.85	2.45	2.15	1.65	1.25	1.00	1.70	1.85	2.00	1.95
11.....	4.50	2.05	1.90	2.40	2.10	1.55	1.20	1.05	1.75	1.90	1.95	1.95
12.....	5.00	2.00	2.10	2.40	2.15	1.50	1.30	1.05	1.70	2.00	1.90	1.90
13.....	4.50	2.05	2.25	2.45	2.05	1.55	1.30	1.00	1.70	1.95	1.95	1.90
14.....	4.00	2.05	2.40	2.45	2.10	1.55	1.30	1.05	1.80	1.90	1.90	1.90
15.....	3.60	2.00	2.35	2.40	2.15	1.45	1.20	1.05	1.70	1.90	1.90	2.00
16.....	3.35	2.00	2.30	2.35	2.10	1.45	1.25	1.05	1.70	1.95	1.85	2.00
17.....	3.50	2.00	2.15	2.30	1.95	1.40	1.20	1.05	1.75	1.90	1.85	1.95
18.....	4.00	1.95	2.75	2.25	1.95	1.40	1.20	1.20	1.75	1.90	1.90	1.95
19.....	4.50	1.95	3.00	2.20	1.90	1.45	1.20	1.15	1.70	1.80	1.85	2.00
20.....	4.60	2.00	3.05	2.20	1.95	1.40	1.20	1.20	1.70	1.85	1.85	2.00
21.....	3 50	2.00	3.20	2.20	1.90	1.40	1.20	1.20	1.75	1.75	1.85	1.95
22.....	3.50	1.95	3.00	2.25	1.95	1.40	1.25	1.20	1.80	1.80	1.90	1.90
23.....	3.10	1.85	2.85	2.20	1.95	1.40	1.30	1.15	1.75	1.75	1.90	1.90
24.....	2.95	1.85	5.20	2.15	2.00	1.40	1.30	1.15	1.75	1.80	1.90	1.95
25.....	2.30	1.80	5.95	2.25	1.90	1.40	1.25	1.20	1.80	1.85	1.90	1.90
26.....	2.45	1.75	5.90	2.30	2.00	1.40	1.20	1.20	1.80	1.90	1.90	1.90
27.....	2.25	1.65	5.95	2.25	2.00	1.45	1.20	1.25	1.75	1.95	1.90	1.90
28.....	2.20	1.65	6.00	2.30	2.05	1.45	1.20	1.30	1.75	2.00	1.90	1.90
29.....	2.15	......	5.40	2.25	2.10	1.40	1.20	1.35	1.80	2.00	1.90	1.90
30.....	2.15	......	5.20	2.30	2.10	1.40	1.20	1.30	1.80	1.95	1.90	1.90
31.....	2.10	......	4.80	......	2.00	......	1.20	1.30	......	1.90	......	1.90

Current-meter Discharge Measurements of Butternut Creek near Jamesville, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Sub-mergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
1913.						*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
April 11	Robbins & Wallace..	2 85	2.90	2.88	360	2	0.6	90	36.9	196
Sept. 10	Leggett & Wallace..	1.67	1.67	1.67	360	2	0.6	45	30.7	58

Mean Daily Discharge, Second-feet, of Butternut Creek near Jamesville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	100	112	56	*a*	142	82	30	22	30	76	100	88
2.....	176	106	56	*a*	142	82	30	22	30	76	94	88
3.....	410	100	56	*a*	142	71	30	22	34	76	94	88
4.....	410	100	56	*a*	134	71	30	22	38	71	88	82
5.....	344	100	66	*a*	134	71	38	16	38	82	88	76
6.....	344	106	71	344	126	66	30	13	56	82	94	82
7.....	410	100	56	206	126	66	30	13	76	76	88	88
8.....	410	100	56	247	126	66	30	12	76	76	94	88
9.....	490	100	76	186	126	61	26	12	76	88	88	100
10.....	*a*	112	82	167	119	61	26	12	66	82	100	94
11.....	*a*	106	88	158	112	51	22	13	71	88	94	94
12.....	*a*	100	112	158	119	46	30	13	66	100	88	88
13.....	*a*	106	134	167	106	51	30	12	66	94	94	88
14.....	620	106	158	167	112	51	30	13	76	88	88	88
15.....	440	100	150	158	119	42	22	13	66	88	88	100
16.....	371	100	142	150	112	42	26	13	66	94	82	100
17.....	410	100	119	142	94	38	22	13	71	88	82	94
18.....	620	94	226	134	94	38	22	22	71	88	88	94
19.....	*a*	94	280	126	88	42	22	19	66	76	82	100
20.....	*a*	100	292	126	94	38	22	22	66	82	82	100
21.....	410	100	330	126	88	38	22	22	71	71	82	94
22.....	410	94	280	134	94	38	26	22	76	76	88	88
23.....	304	82	247	126	94	38	30	19	71	71	88	88
24.....	269	82	*a*	119	100	38	30	19	71	76	88	94
25.....	142	76	*a*	134	88	38	26	22	76	82	88	88
26.....	167	71	*a*	142	100	38	22	22	76	88	88	88
27.....	134	61	*a*	134	100	42	22	26	71	94	88	88
28.....	126	61	*a*	142	106	42	22	30	71	100	88	88
29.....	119	......	*a*	134	112	38	22	34	76	100	88	88
30.....	119	......	*a*	142	112	38	22	30	76	94	88	88
31.....	112	......	*a*	......	100	......	22	30	......	88	......	88
Mean...	315	95	139	159	112	51	26	19	65	84	89	90

a Beyond limits of rating curve.

Monthly Discharge of Butternut Creek near Jamesville, N. Y.
[Drainage area, 53 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches in drainage area.
1913.					
January	[a]620	100	315	5.94	6.85
February	112	61	95	1.79	1.86
March	[a]330	56	139	2.62	3.02
April	[a]344	119	159	3.00	3.35
May	142	88	112	2.11	2.43
June	82	38	51	0.962	1.07
July	38	22	26	0.491	0.566
August	30	12	19	0.358	0.413
September	76	30	65	1.23	1.37
October	100	71	84	1.58	1.82
November	100	82	89	1.68	1.87
December	100	76	90	1.70	1.96

[a] Actual maximum beyond limits of rating curve.

LIMESTONE CREEK.

DESCRIPTION.

The natural source of Limestone creek is on the slope of Tinselor hills near Erieville, Madison county, N. Y. In the construction of the Chenango canal, Tioughnioga creek was diverted and DeRuyter reservoir receives the drainage tributary to this stream above the point of diversion and also that from additional area tributary to Limestone creek, making a total area above the reservoir outlet of 18.8 square miles. The reservoir has a capacity of 504,468,000 cubic feet, and a surface area of about 1.0 square mile. The stored waters are discharged through Limestone creek during the canal navigation season. Water is diverted to a feeder by a dam below Manlius. The feeder is used as a water-power canal to supply several mills at Fayetteville, at which place there is a second diverting dam. The feeder enters Erie canal 1.2 miles below Fayetteville. Power is also developed on Limestone creek at Manlius and Edwards Falls. The head waters of Limestone creek are at elevation 1,900 feet. DeRuyter reservoir is at elevation 1,286 feet. The fall of the stream is rapid in the first three miles below the reservoir, the elevation at the lower end of this reach at Delphi being 900 feet. From Delphi to Buellville the creek follows a winding course over a flat valley bottom averaging about one-half mile in width. The descent in 8 miles between these points is 150 feet. Between Buellville and Manlius, a distance of two miles, a fall of 200 feet occurs. This is mostly concentrated at Edwards Falls. The west or Watervale branch of Limestone creek joins the main stream below Manlius. The precipitous descent of about 100 feet in a short distance occurs at this branch at Stone Quarry Falls. The drainage basin is shown on the Syracuse, Tully, Chittenango and Cazenovia sheets of the United States Geological Survey topographical map.

LIMESTONE CREEK AT FAYETTEVILLE, N. Y.

This gaging station, which is located above the State dam at the head of the Erie canal feeder in Fayetteville, was established August 27, 1905, by C. A. Poole.

The gage is a vertical board, graduated in feet and tenths, and is secured to retaining wall on south side of gates at entrance to feeder, about 55 feet above crest of dam. The elevation of zero of gage is 429.53. The elevation of bench-mark on east end of north retaining wall of feeder, 42 feet east of gates, is 434.74. Observations are taken twice daily.

The dam is of masonry and in good condition, having been rebuilt in 1897. It is of trapezoidal shape with an approach slope of 1 to 6 and vertical downstream face. The length of crest is 99.1 feet at an average elevation of 431.18.

The flow in the feeder is controlled by gateways at entrance. There are four openings in the bulkhead, which are regulated by means of drop planks.

A gage was temporarily maintained in the canal feeder at Fayetteville, but the fluctuation was so slight that it has been discontinued.

Water is also diverted through the cement mill on east side of creek. Current-meter measurements were formerly made in the raceway to mill, and in the canal feeder. The freshet discharge of the stream can be determined at this site, but a separate gaging station was established at Manlius in July, 1907, to determine the low-water flow.

Computations of discharge are not at present available.

LIMESTONE CREEK AT MANLIUS, N. Y.

A gaging station was established July 23, 1907, by Robert E. Horton, for this Department, at Wilcox avenue bridge in Manlius. The gage consists of a triangular box containing a scale graduated to tenths from zero to 7.4, and a chain and weight by which the readings are taken. This gage is attached to the bottom chord of the downstream side of the bridge. The length of the chain and weight is 14.00 feet. Readings are taken by John Carroll at 7 A. M. and 6 P. M. each day. Current-meter measurements are made from the downstream side of the bridge, starting at the face of the left-hand abutment as an initial point. The bridge is subdivided into 2.5-foot sections for purposes of measurement. The span is 73 feet.

Mean Daily Gage Height, in Feet, of Limestone Creek at Manlius, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	3.00	2.60	3.30	3.50	2.85	3.00	2.40	2.15	*a*	*a*	2.50	2.70
2.....	3.50	2.50	3.00	3.40	2.70	2.75	2.42	2.32	*a*	*a*	2.50	2.90
3.....	3.80	2.50	3.00	3.30	2.70	2.70	2.10	2.32	*a*	*a*	2.50	2.80
4.....	3.80	2.50	3.00	3.10	2.75	2.65	2.22	2.58	*a*	*a*	2.48	2.90
5.....	3.80	2.50	3.00	2.80	2.60	2.50	2.42	2.48	*a*	*a*	2.60	2.80
6.....	3.80	2.50	3.00	2.60	2.65	2.65	2.35	2.30	*a*	*a*	2.50	2.80
7.....	3.80	2.50	2.90	2.50	2.52	2.58	2.38	2.30	*a*	*a*	2.70	3.00
8.....	3.80	2.50	2.90	2.50	2.55	2.60	2.42	2.35	*a*	2.00	2.50	3.20
9.....	3.80	2.60	3.40	2.50	2.45	2.52	2.50	2.48	*a*	2.30	2.80	2.80
10.....	4.00	2.60	3.50	2.50	2.30	2.60	2.42	2.60	*a*	2.30	3.10	2.90
11.....	4.00	2.50	3.50	3.60	2.40	2.58	2.50	2.55	*a*	2.40	2.90	3.10
12.....	4.00	2.50	3.60	3.30	2.30	2.65	2.62	2.55	*a*	2.50	3.00	3.00
13.....	3.80	2.50	3.90	3.00	2.35	2.50	2.48	2.52	*a*	2.50	2.90	3.10
14.....	3.50	2.50	4.00	3.00	2.30	2.40	2.62	2.45	*a*	2.70	3.20	3.20
15.....	3.20	2.50	4.00	3.00	2.40	2.35	2.45	2.45	*a*	2.60	3.40	3.10
16.....	3.20	2.50	3.80	2.90	2.40	2.52	2.48	2.48	*a*	2.70	3.00	3.20
17.....	3.20	2.50	3.70	2.95	2.30	2.48	2.45	2.60	*a*	2.60	2.90	3.10
18.....	3.20	2.80	3.40	2.85	2.20	2.40	2.45	2.55	*a*	2.40	2.70	3.40
19.....	3.20	2.80	3.30	2.98	2.25	2.48	2.28	2.52	*a*	2.50	2.70	3.20
20.....	3.20	3.00	3.10	2.85	2.45	2.52	2.32	2.45	*a*	2.50	2.90	3.00
21.....	3.20	3.20	3.10	2.75	2.45	2.38	2.42	2.45	*a*	2.80	3.40	3.00
22.....	3.20	3.20	3.10	2.75	2.65	2.52	2.35	2.48	*a*	2.60	2.90	3.10
23.....	3.00	3.20	3.10	2.85	2.55	2.40	2.32	1.95	*a*	2.60	3.00	3.40
24.....	3.00	3.20	3.00	2.80	2.70	2.42	2.98	*a*	*a*	2.50	2.90	3.20
25.....	3.00	3.20	5.25	3.00	2.70	2.50	2.75	*a*	*a*	2.60	3.10	3.10
26.....	3.00	3.20	5.20	2.80	2.55	2.58	2.52	*a*	*a*	2.70	3.10	3.00
27.....	3.00	3.20	5.10	2.85	2.70	2.65	2.28	*a*	*a*	2.60	3.00	2.90
28.....	2.80	3.50	4.70	2.72	2.98	2.45	2.12	*a*	*a*	2.60	2.90	3.20
29.....	2.80	......	3.50	2.80	2.90	2.40	2.00	*a*	*a*	2.50	2.90	3.10
30.....	2.80	......	3.50	2.68	2.70	2.42	2.00	*a*	*a*	2.50	2.90	3.20
31.....	2.80	......	3.50	......	2.80	......	2.05	*a*	......	2.60	......	2.40

a No record.

Current-meter Discharge Measurements of Limestone Creek at Manlius, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
1911.						*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
April 13	Robbins & Wallace..	3.50	3.55	3.60	360	2	0.6	70	39.5	384
Sept. 10	Leggett & Wallace..	2.30	2.31	2.30	360	2	0.6	24	20.0	43

Mean Daily Discharge, Second-feet, of Limestone Creek at Manlius, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.*b*	Oct.	Nov.	Dec.
1913.												
1	128	64	184	220	103	128	40	17	......	*b*	52	80
2	220	52	128	202	80	87	42	32	......	*b*	52	112
3	280	52	128	184	80	80	14	32	......	*b*	52	94
4	280	52	128	146	87	72	22	62	......	*b*	40	112
5	280	52	128	94	64	52	42	50	......	*b*	64	94
6	280	52	128	64	72	72	35	30	......	*b*	52	94
7	280	52	112	52	54	62	38	30	......	*b*	80	128
8	280	52	112	52	58	64	42	35	......	10	52	164
9	280	64	202	52	46	54	52	50	......	30	94	94
10	318	64	220	52	30	64	42	64	......	30	146	112
11	318	52	220	240	40	62	52	58	......	40	112	146
12	318	52	240	184	30	72	67	58	......	52	128	128
13	280	52	298	128	35	52	50	54	......	52	112	146
14	220	52	318	128	30	40	67	46	......	80	164	164
15	164	52	318	128	40	35	46	46	......	64	202	146
16	164	52	280	112	40	54	50	50	......	80	128	164
17	164	52	260	120	30	50	46	64	......	64	112	146
18	164	94	202	103	20	40	46	58	......	40	80	202
19	164	64	184	125	25	50	28	54	......	52	80	164
20	164	128	146	103	46	54	32	46	......	52	112	128
21	164	164	146	87	46	38	42	46	......	94	202	128
22	164	164	146	87	72	54	35	50	......	64	112	146
23	128	164	146	103	58	40	32	8	......	64	128	202
24	128	164	128	94	80	42	125	*b*	......	52	112	164
25	128	164	*a*	128	80	52	87	*b*	......	64	146	146
26	128	164	*a*	94	58	62	54	*b*	......	80	146	128
27	128	164	578	103	80	72	28	*b*	......	64	128	112
28	94	220	472	83	125	46	15	*b*	......	64	112	164
29	94	......	220	94	112	40	10	*b*	......	52	112	146
30	94	......	220	77	80	42	10	*b*	......	52	112	164
31	94	......	220	......	94	......	12	*b*	......	64	......	40
Mean	196	93	214	115	61	58	42	45	......	57	107	134

a Beyond limits of rating curve. *b* No record.

Monthly Discharge of Limestone Creek at Manlius, N. Y.

[Drainage area, 67 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	318	94	196	2.93	3.38
February	220	52	93	1.39	1.45
March	578[a]	112	214	3.19	3.68
April	240	52	115	1.71	1.91
May	125	20	61	0.91	1.04
June	128	35	58	0.866	0.966
July	125	10	42	0.627	0.723
August	64	8	45	0.672	0.774
September *b*	....	....	....	....	....
October	94	10	57	0.851	0.981
November	292	40	107	1.60	1.78
December	202	40	134	2.00	2.31

a Actual maximum beyond limits of rating curve.
b No record.

ONEIDA CREEK.

DESCRIPTION.

The headwaters of Oneida creek are in northeastern Madison county. Above Peterboro the drainage is mostly through a swamp averaging one-half mile in width by 2½ miles in length. The stream flows easterly from this swamp to the foot of the falls above Munnsville. In the vicinity of the falls the stream descends from elevation 1,100 to elevation 700 in about three miles. From Munnsville to Oneida the creek flows through a somewhat dissected valley of one mile average width, bordered by steep slopes rising 500 feet or more within a distance of one mile on either side. North of Oneida Castle the drainage is rather flat. Oneida creek enters the eastern end of Oneida lake near South Bay, the elevation of the lake being at 370. Water-power is utilized at Oneida Community and at Munnsville. A feeder dam at Oneida Castle diverts most of the low-water flow to the Erie canal through a feeder 2.9 miles long entering the canal at Durhamville. The drainage basin as a whole is irregularly pear-shaped and the upper basin is broad. The slopes are steep and the tributaries are well distributed and moderately branching. This basin is shown on the Morrisville, Oneida, Chittenango and Cazenovia sheets of the U. S. Geological Survey topographic map.

ONEIDA CREEK AT KENWOOD, N. Y.

A gaging station was established at the Oneida Community Dam and Silk Mill, June 11, 1907, by Robert E. Horton. A four-foot enamelled steel gage graduated to hundredths of feet is attached to a tree on the left-hand bank of Oneida creek, 175 feet upstream from the dam. The dam is of timber, having a crest length of 79.25 feet. The crest is nearly level and the cross-section is uniform throughout the entire length. A board gage with painted 10th-foot marks was also placed in the tail-race immediately below the silk mill. The silk mill contains one 24-inch Hercules and one 24-inch Camden water-wheel. Records are kept by H. L. Mason, showing the crest and tail-race gage readings each morning and night, together with the gate opening and number of hours run per day for each water-wheel. The elevations are referred to an assumed bench-mark consisting of a chiselled cross on the upstream corner of the right-hand abutment of the dam.

Elevation of assumed bench-mark..................	100.00
Elevation of crest gage zero.........................	94.01
Mean crest elevation, about.........................	95.60
Tail-race gage zero	82.97

Current-meter measurements were made in the tail-race to determine the turbine discharge in 1907.

The results of gaging at this station, 1898 to 1900, inclusive, may be found in the report of State Engineer and Surveyor for 1902, supplement, pages 49–52. Additional data is given in the report for 1906, supplement, pages 138–139.

Mean Daily Discharge, Second-feet, of Oneida Creek at Kenwood, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1......	203	129	189	300	60	*68	36	3	55	14	41	71
2......	243	*134	*193	250	48	77	24	10	51	42	*14	56
3......	243	146	232	219	48	51	15	*16	41	47	58	52
4......	300	89	224	203	*55	34	14	47	33	24	47	51
5......	*134	87	232	243	53	32	33	30	30	*50	43	19
6......	297	71	210	*157	49	34	*55	21	37	58	60	52
7......	541	62	178	182	30	*8	55	17	*60	42	68	*81
8......	667	62	163	182	34	*50	38	16	64	27	*a*	51
9......	395	*60	*243	157	32	72	60	15	47	20	**a*	64
10......	338	74	375	86	30	37	54	*16	33	26	95	67
11......	356	65	458	219	*30	34	36	43	19	8	64	67
12......	*325	62	368	140	51	32	14	202	12	*11	64	72
13......	219	46	276	*115	38	26	*16	21	11	21	82	73
14......	101	48	395	134	22	30	39	14	*33	38	58	*75
15......	116	58	369	134	29	*24	21	14	58	51	70	82
16......	121	*50	*312	125	30	49	30	10	45	30	*68	82
17......	306	43	257	59	28	32	15	*11	56	21	*a*	74
18......	497	38	183	96	*44	22	15	37	54	21	*a*	69
19......	*175	38	151	217	66	24	14	15	35	*68	38	58
20......	183	43	160	*75	40	24	*20	15	41	138	58	57
21......	219	233	151	72	32	24	33	16	*103	147	74	*81
22......	189	264	123	67	32	*38	20	15	113	100	65	79
23......	193	*175	*125	102	38	44	15	10	74	82	*81	78
24......	208	89	151	82	90	39	16	*30	57	69	71	82
25......	161	74	1,107	56	*60	29	16	24	42	63	56	81
26......	*168	96	933	52	95	30	17	19	36	*86	30	84
27......	194	259	983	*55	56	29	*14	14	32	82	38	84
28......	200	358	890	86	130	20	30	12	*50	69	71	*81
29......	175	......	448	84	87	*44	19	12	53	51	70	84
30......	168	......	*387	70	50	45	19	10	31	49	*81	88
31......	141	......	333	......	52	......	16	*14	......	51	......	82
Mean...	251	105	348	134	50	35	26	24	47	52	60	70

a No record. * Sunday.

Monthly Discharge of Oneida Creek at Kenwood, N. Y.
[Drainage area, 63 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	667	101	251	3.98	4.59
February	358	38	105	1.67	1.74
March	1,107	123	348	5.52	6.36
April	300	52	134	2.13	2.38
May	130	22	50	0.795	0.916
June	77	8	35	0.556	0.619
July	66	14	26	0.413	0.476
August	202	3	24	0.381	0.439
September	113	11	47	0.746	0.832
October	147	8	52	0.825	0.951
November	95	14	60	0.953	1.06
December	88	19	70	1.11	1.24

SENECA RIVER DRAINAGE BASIN.

DESCRIPTION.

Seneca river receives the drainage from the central group of lakes lying southward from Lake Ontario, known as the finger lakes. The drainage basin is rolling, though not precipitous, excepting for the deep narrow valleys crossing it, in which the lakes are situated, and certain additional valleys not at the present time occupied by lakes. All of the lakes properly belonging to the finger lake system do not drain into the Seneca river. Oneida lake on the east is tributary to Oneida river, while on the west of the Seneca river there is a series of lakes, including Honeoye, Canadice, Hemlock and Conesus lakes, smaller than, but parallel with and otherwise similar to the main finger lakes, which are tributary to Genesee river. The upper lakes of the system in the Seneca river basin are Onondaga, Otisco, Skaneateles, Owasco, Cayuga, Seneca, Keuka and Canandaigua lakes.

The stream designated as Seneca river originates at the outlet of Seneca lake, flows easterly to the foot of Cayuga lake, which discharges into it, and then northerly through the extensive Montezuma marshes to a point near Savannah where it leaves the broad marsh area and turns easterly, passing to the north of Syracuse, and receiving Onondaga outlet, then turning northerly and joining Oneida river at Three River Point to form the Oswego river. The most important tributaries of Seneca river are the outlets of Onondaga, Otisco, Skaneateles and Owasco lakes, and Clyde river, which enters the Seneca river near Clyde, and which in turn is formed by the junction of Mud creek and Canandaigua outlet at Lyons.

WATER-SURFACE ELEVATION RECORDS ON SENECA RIVER AND TRIBUTARIES.

The following tables show the mean daily elevation of water-surface at different gages maintained on Seneca river and tributaries during the year 1913. The elevation of water-surface is referred to Barge canal datum, which is equivalent to mean tide at New York, taking the bench-mark at Greenbush (Rensselaer) as 14.73.

The accompanying table shows the details of the different gages and the manner in which the readings are taken.

Water-surface Elevation Gages Maintained on the Seneca River and Tributaries During the Year 1913.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to —
Seneca river:						
Belgium, highway bridge	April 14, 1904	A. R. Gates	360.00	Staff	0.1 foot	0.1 foot.
Liverpool, Mud lock, No. 5	April 16, 1904	Frank Shane	361.37	Staff	0.1 "	0.1 "
Baldwinsville, below dam	Nov. 12, 1898	Chas. Brannock	361.75	Chain	0.1 "	0.1 "
Baldwinsville, above dam	Nov. 12, 1898	Chas. Brannock	372.26	Staff	0.1 "	0.1 "
Memphis, below Jack's Reef	April 20, 1904	W. H. Burns	374.02	Staff	0.1 "	0.1 "
Jordan, Cross lake bridge	May 1, 1904	Mark Quimby	373.59	Staff	0.1 "	0.1 "
Port Byron, Mosquito Point bridge	April 21, 1904	Wm. Prettie	372.85	Staff	0.1 "	0.1 "
Savannah, Fox Ridge	May 4, 1904	A. C. Carr	376.00	Chain	0.1 "	0.1 "
Cayuga, near Cayuga lake	Oct. 10, 1905	Barge canal employee	381.42	Staff	0.1 "	0.1 "
Seneca Falls, near, below lock No. 6	Nov. 16, 1909	Barge canal employee	391.42	Staff	0.1 "	0.1 "
Seneca Falls, near, above lock No. 3	Aug. 16, 1909	Barge canal employee	427.09	Staff	0.1 "	0.1 "
Waterloo, below lock No. 2	Aug. 11, 1909	Barge canal employee	428.53	Staff	0.1 "	0.1 "
Waterloo, above lock No. 1	Aug. 11, 1909	Barge canal employee	443.37	Staff	0.1 "	0.1 "
Geneva, below guard-lock	April 16, 1904	John Quail	445.83	Staff	0.1 "	0.1 "
Geneva, above guard-lock	May 14, 1904	John Quail	445.73	Staff	0.1 "	0.1 "
Onondaga outlet — Long Branch	April 16, 1904	Mark Kennedy	360.00	Staff	0.1 "	0.1 "
Onondaga lake — Syracuse	May 14, 1904	Chas. Bourke	369.15	Ref. point.	Inch	Inch
Onondaga creek — Syracuse, Temple St. bridge	Jan. 1, 1908	L. W. Moulton	376.11	Chain	0.1 foot	0.1 foot.
Clyde river:						
Clyde	Oct. 20, 1905	Wm. Carroll	378.54	Chain	0.1 "	0.1 "
Lyons	Sept. 27, 1905	Barge canal employee	385.00	Staff	0.1 "	0.1 "
Ganargua creek:						
Newark	Nov. 29, 1905	W. J. Swartz	406.00	Chain	0.1 "	0.1 "
Palmyra	Mar. 25, 1907	C. H. Harrison	419.03	Staff	0.1 "	0.1 "
Canandaigua outlet — Alloway bridge, near Lyons	Sept. 18, 1906	Carl Tusher	403.32	Staff	0.1 "	0.1 "
Canandaigua lake — Canandaigua	Sept. 10, 1909	A. H. O'Reilly	*	Staff	0.1 "	0.1 "
Flint creek — Phelps	Aug. 5, 1910	Ed. Fitzgerald	*	Chain	0.1 "	0.1 "
Cayuga lake:						
Ithaca, breakwater	Aug. 6, 1905	Seymour Addis	381.75	Staff	0.1 "	0.1 "
Ithaca, above Cornell boat-house	Nov. 1, 1912	Barge canal employee	381.55	Staff	0.1 "	0.1 "

* Arbitrary datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at Mud Lock, near Long Branch, Liverpool P. O., N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.*a*	Nov.	Dec.
1913.												
1.....	364.97	367.07	364.97	369.57	364.67	364.07	363.67	362.07	362.67	......	363.77	363.97
2.....	365.07	366.87	364.77	369.57	364.67	363.97	363.67	361.77	362.67	......	363.87	363.97
3.....	365.17	366.67	364.57	369.27	364.67	364.07	363.57	361.47	362.67	......	363.87	363.97
4.....	365.97	366.47	364.37	369.07	364.67	364.07	363.57	361.47	362.57	......	363.87	363.97
5.....	366.17	366.37	364.37	368.87	364.67	364.07	363.67	361.47	362.57	......	363.87	363.97
6.....	366.37	366.37	364.37	368.67	364.57	363.97	363.67	361.47	362.67	......	363.77	363.87
7.....	366.77	366.37	364.37	368.47	364.57	363.97	363.57	361.37	362.67	......	363.77	363.87
8.....	366.97	365.97	364.67	368.27	364.57	364.07	363.57	361.47	362.67	......	363.67	363.97
9.....	367.07	365.57	364.97	367.97	364.47	363.97	363.37	361.57	362.57	......	363.67	363.97
10.....	367.27	365.37	365.17	367.67	364.37	364.07	363.27	361.67	362.57	......	363.67	363.97
11.....	367.17	365.37	365.27	367.57	364.27	363.97	363.27	361.77	362.57	......	363.67	364.07
12.....	367.07	365.37	365.57	367.17	364.27	363.97	363.17	362.17	362.47	......	363.67	364.17
13.....	367.17	365.57	365.87	366.97	364.17	363.97	363.17	362.37	362.47	......	363.77	364.27
14.....	367.37	365.67	366.27	366.87	364.17	363.87	363.17	362.77	362.37	......	363.87	364.27
15.....	367.37	365.47	366.57	366.77	364.17	363.87	363.07	362.77	362.37	......	363.87	364.27
16.....	367.37	365.37	366.47	366.67	364.17	363.67	363.07	362.77	362.37	......	363.87	364.17
17.....	367.47	365.27	366.37	366.57	363.87	363.67	363.17	362.87	362.37	......	363.97	364.07
18.....	367.77	365.37	366.17	366.27	363.87	363.77	363.17	362.87	362.47	......	363.97	364.07
19.....	368.07	365.37	366.07	366.07	363.97	363.77	363.07	362.87	362.47	......	363.97	364.07
20.....	368.17	365.27	365.87	365.97	364.07	363.87	363.07	362.87	362.47	......	364.07	364.07
21.....	368.27	365.27	365.67	365.77	364.27	363.87	363.07	362.97	362.57	......	364.07	364.07
22.....	368.37	365.07	365.57	365.57	364.17	363.77	363.07	362.97	362.67	......	363.97	364.07
23.....	368.47	365.27	365.37	365.17	364.17	363.77	362.97	362.77	362.87	......	363.97	363.97
24.....	368.47	365.17	365.17	365.07	363.77	363.67	362.97	362.77	362.87	......	363.97	363.87
25.....	368.47	365.17	365.77	364.97	363.77	363.67	362.87	362.77	362.87	......	363.97	363.87
26.....	368.37	365.17	366.67	364.87	363.77	363.67	362.87	362.67	362.77	......	363.87	363.87
27.....	368.27	364.97	367.87	364.77	363.87	363.67	362.77	362.67	362.77	......	363.97	363.77
28.....	368.17	364.97	368.87	364.77	363.87	363.57	362.67	362.67	362.87	......	363.97	363.67
29.....	367.87	......	369.07	364.77	363.97	363.57	362.57	362.67	362.97	......	363.97	363.57
30.....	367.67	......	369.27	364.77	363.97	363.57	362.57	362.67	362.97	......	363.97	363.57
31.....	367.47	......	369.57	......	364.17	......	362.47	362.67	......		......	363.47

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Onondaga Outlet near Long Branch Liverpool P. O., N. Y.

DAY.	Jan.*a*	Feb.*a*	Mar.*a*	April.*a*	May.*a*	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	......	......	......	......	......	*a*	363.90	362.20	363.00	362.40	363.80	364.30
2.....	......	......	......	......	......	*a*	*a*	361.70	362.80	362.40	*a*	364.20
3.....	......	......	......	......	......	*a*	*a*	*a*	362.70	361.90	*a*	364.20
4.....	......	......	......	......	......	*a*	*a*	361.90	*a*	*a*	*a*	364.20
5.....	......	......	......	......	......	*a*	363.90	362.70	362.90	*a*	*a*	364.20
6.....	......	......	......	......	......	*a*	*a*	361.90	*a*	*a*	363.80	364.20
7.....	......	......	......	......	......	*a*	363.90	361.50	*a*	*a*	363.80	364.20
8.....	......	......	......	......	......	*a*	363.70	362.10	362.80	*a*	363.80	364.30
9.....	......	......	......	......	......	*a*	363.60	362.30	*a*	*a*	*a*	364.30
10.....	......	......	......	......	......	*a*	363.50	*a*	362.30	362.60	364.00	364.30
11.....	......	......	......	......	......	363.70	363.50	362.90	362.40	362.50	364.00	364.30
12.....	......	......	......	......	......	364.00	363.50	363.00	*a*	*a*	*a*	364.30
13.....	......	......	......	......	......	364.20	*a*	363.00	362.40	*a*	*a*	364.20
14.....	......	......	......	......	......	*a*	363.70	362.90	*a*	362.80	364.10	364.20
15.....	......	......	......	......	......	*a*	*a*	363.00	362.00	362.90	*a*	364.20
16.....	......	......	......	......	......	*a*	363.50	363.00	362.00	*a*	*a*	364.20
17.....	......	......	......	......	......	*a*	363.50	*a*	*a*	363.00	364.30	364.20
18.....	......	......	......	......	......	*a*	363.40	363.40	362.40	*a*	*a*	364.10
19.....	......	......	......	......	......	*a*	363.30	363.30	362.50	*a*	*a*	364.10
20.....	......	......	......	......	......	364.00	*a*	*a*	362.60	362.70	364.20	364.10
21.....	......	......	......	......	......	363.90	363.50	363.20	*a*	362.90	364.30	364.10
22.....	......	......	......	......	......	*a*	363.50	*a*	363.20	363.10	*a*	364.20
23.....	......	......	......	......	......	*a*	363.30	363.00	363.20	363.30	*a*	364.20
24.....	......	......	......	......	......	*a*	363.20	*a*	363.00	*a*	364.40	364.20
25.....	......	......	......	......	......	363.80	363.10	363.30	363.00	*a*	*a*	364.20
26.....	......	......	......	......	......	364.00	363.00	362.20	362.90	*a*	364.30	364.30
27.....	......	......	......	......	......	363.90	*a*	363.10	*a*	364.10	*a*	364.30
28.....	......	......	......	......	......	*a*	363.20	362.80	*a*	364.10	364.30	364.30
29.....	......	......	......	......	......	*a*	*a*	363.00	362.70	364.00	*a*	364.30
30.....	......	......	......	......	......	363.80	363.20	363.00	*a*	*a*	*a*	364.40
31.....	......	......	......	......	......	......	*a*	*a*	......	*a*	......	364.40

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Onondaga Lake, at Syracuse, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	364.73	367.48	365.15	369.48	364.57	364.23	363.48	362.57	362.65	362.40	363.73	363.98
2.....	364.73	367.15	364.82	369.48	364.48	364.15	363.48	362.48	362.57	362.32	363.65	363.90
3.....	364.82	366.90	364.73	369.15	364.48	364.07	363.48	362.40	362.57	362.23	363.65	363.82
4.....	366.07	366.73	364.65	368.98	364.48	363.98	363.48	362.40	362.73	362.15	363.65	363.73
5.....	366.23	366.40	364.57	368.82	364.48	363.90	363.48	362.32	362.73	362.15	363.65	363.65
6.....	366.32	366.15	364.48	368.57	364.40	363.82	363.48	362.23	362.65	362.15	363.57	363.65
7.....	366.65	365.82	364.48	368.32	364.40	363.82	363.48	362.23	362.57	362.15	363.57	363.73
8.....	366.73	365.73	364.48	368.15	364.40	363.73	363.48	362.15	362.57	362.15	363.57	363.73
9.....	366.73	366.07	364.82	368.07	364.32	363.73	363.40	362.15	362.48	362.15	363.65	363.82
10.....	366.82	366.23	365.15	367.90	364.32	363.65	363.40	362.15	362.48	362.15	363.65	363.82
11.....	366.90	366.23	365.40	367.73	364.23	363.65	363.40	362.48	362.48	362.15	363.73	363.82
12.....	367.65	366.15	365.65	367.57	364.23	363.57	363.40	362.65	362.40	362.40	363.73	363.82
13.....	367.57	366.15	365.90	367.40	364.15	363.57	363.32	362.65	362.40	362.57	363.73	363.73
14.....	367.40	366.07	366.15	367.23	364.07	363.48	363.32	362.65	362.32	362.57	363.82	363.73
15.....	367.40	365.98	366.40	366.90	364.07	363.48	363.23	362.65	362.23	362.57	363.82	363.73
16.....	367.40	365.90	366.40	366.73	363.98	363.65	363.23	362.65	362.15	362.57	363.90	363.73
17.....	367.48	365.82	366.32	366.48	363.90	363.65	363.15	362.65	362.15	362.57	363.90	363.73
18.....	367.65	365.73	366.23	366.23	363.90	363.57	363.15	362.65	332.23	362.57	363.90	363.73
19.....	368.15	365.65	366.07	366.07	363.90	363.48	363.07	362.65	362.23	362.57	363.98	363.73
20.....	368.15	365.57	365.90	365.82	363.90	363.48	363.07	362.65	362.23	362.73	363.98	363.73
21.....	368.15	365.48	365.73	365.65	363.90	363.65	362.90	362.65	362.23	362.82	363.98	363.73
22.....	368.32	365.40	365.57	365.48	363.98	363.57	362.98	362.73	362.90	362.90	363.98	363.73
23.....	368.32	365.32	365.48	365.32	364.07	363.57	362.98	362.73	362.90	362.90	363.98	363.82
24.....	368.32	365.32	365.48	365.15	363.98	363.65	363.07	362.73	362.82	362.98	363.98	363.82
25.....	368.32	365.23	365.73	364.98	364.07	363.65	362.98	362.73	362.73	363.07	363.98	363.82
26.....	368.23	365.23	367.65	364.82	364.23	363.57	362.90	362.65	362.65	363.48	363.98	363.82
27.....	368.07	365.23	368.82	364.73	364.40	363.48	362.82	362.65	362.65	363.73	363.98	363.82
28.....	367.90	365.23	368.98	364.73	364.48	363.48	362.82	362.57	362.57	363.73	363.98	363.82
29.....	367.73	......	368.98	364.65	364.48	363.48	362.73	362.73	362.57	363.73	363.98	363.82
30.....	367.57	......	369.15	364.57	364.40	363.48	362.73	362.73	362.48	363.73	363.98	363.82
31.....	367.57	......	369.15	......	364.32	......	362.65	362.73	......	363.73	......	363.82

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Onondaga Creek at Temple Street, Syracuse, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	380.64	380.21	379.76	381.63	379.61	*a*	378.63	378.95	*a*	381.01	379.46	381.01
2.....	380.26	*a*	*a*	381.03	379.49	379.51	378.59	378.96	379.39	380.96	*a*	380.83
3.....	380.31	379.71	379.11	380.89	379.46	379.26	378.58	*a*	379.11	381.17	379.41	380.66
4.....	384.14	379.66	379.61	380.89	*a*	379.12	378.51	378.98	378.91	381.23	379.41	380.26
5.....	*a*	379.41	379.36	381.36	379.35	379.09	378.59	379.11	378.98	*a*	379.56	380.44
6.....	381.09	379.36	379.26	*a*	379.31	379.01	*a*	378.82	379.46	381.30	379.36	380.51
7.....	382.59	379.60	378.73	380.86	379.28	378.99	378.53	378.87	*a*	381.22	379.01	*a*
8.....	382.65	379.46	379.41	380.66	379.28	*a*	378.51	378.91	*a*	381.26	379.01	381.21
9.....	381.56	*a*	*a*	380.31	379.23	379.09	378.51	378.81	*a*	381.30	*a*	381.26
10.....	381.03	379.23	382.06	380.38	379.18	379.01	378.51	*a*	*a*	381.21	382.01	381.01
11.....	380.91	379.26	381.39	380.56	*a*	378.96	378.54	379.18	*a*	381.30	381.46	380.41
12.....	*a*	379.31	381.41	380.66	379.19	378.89	378.48	378.91	*a*	*a*	381.26	379.61
13.....	382.81	379.26	380.89	*a*	379.19	378.83	*a*	378.81	*a*	381.43	381.06	381.21
14.....	381.72	379.31	381.06	380.51	379.11	378.76	378.49	378.81	*a*	381.41	381.91	*a*
15.....	380.79	379.26	381.59	380.31	379.09	*a*	378.49	378.79	378.89	381.40	381.21	381.26
16.....	380.54	......	*a*	380.20	379.13	378.76	378.45	378.80	379.69	381.39	*a*	381.11
17.....	381.42	379.26	380.32	380.11	379.12	378.71	378.46	*a*	380.66	381.41	381.01	381.01
18.....	382.31	379.14	379.95	379.97	*a*	378.64	378.49	378.81	379.79	381.49	380.93	381.06
19.....	*a*	379.21	380.26	380.36	379.23	378.63	378.43	378.79	379.59	*a*	381.01	381.01
20.....	381.46	379.26	380.16	*a*	379.13	378.73	*a*	378.81	378.91	381.61	381.16	380.71
21.....	381.41	379.81	380.01	379.93	379.06	378.86	378.35	378.77	*a*	381.66	381.61	*a*
22.....	380.91	379.76	380.08	379.81	379.23	*a*	378.34	378.82	381.41	381.53	381.31	381.06
23.....	380.71	*a*	*a*	379.81	379.43	378.91	378.35	378.81	381.31	381.49	*a*	381.06
24.....	381.16	379.51	379.78	379.86	379.76	378.83	380.11	*a*	381.30	381.31	381.16	381.76
25.....	381.01	379.21	382.91	379.76	*a*	378.71	379.11	*a*	381.22	381.31	381.16	381.69
26.....	*a*	379.18	387.90	379.70	379.23	378.71	379.01	*a*	381.33	*a*	381.23	381.61
27.....	380.61	379.39	385.87	*a*	379.33	378.91	*a*	378.91	380.91	381.59	381.16	379.86
28.....	380.41	379.69	385.21	379.61	379.58	378.81	379.01	378.89	*a*	379.41	381.06	*a*
29.....	380.26	......	382.81	380.09	379.84	*a*	378.85	379.31	381.01	379.21	381.09	381.16
30.....	380.11	......	*a*	379.76	379.41	378.71	378.78	381.15	380.93	379.56	......	381.16
31.....	380.30	......	381.63	......	379.22	......	378.84	*a*	......	379.46	......	311.18

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River below Dam at Baldwinsville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1....	365.25	367.85	365.65	370.25	366.20	365.35	364.45	363.23	363.20	363.65	364.10	364.55
2.....	365.25	367.55	365.35	370.25	366.25	365.20	364.45	363.30	363.40	363.35	363.75	364.45
3.....	365.50	367.35	365.20	370.25	366.25	365.20	364.25	363.20	363.30	363.03	364.10	364.45
4.....	366.30	367.30	365.15	370.00	366.25	365.35	364.25	363.15	363.65	362.55	364.20	364.45
5.....	366.74	367.10	365.15	369.75	366.25	365.40	364.20	363.05	363.50	362.55	364.15	364.40
6	367.90	366.95	365.15	369.45	366.20	365.35	364.25	362.80	363.45	362.90	364.15	364.30
7.....	367.40	366.80	365.25	369.20	366.10	365.40	364.25	362.70	362.95	363.55	364.10	364.20
8.....	367.55	367.10	365.25	369.00	366.00	365.40	364.05	362.35	363.35	363.70	364.05	364.50
9.....	367.70	367.45	365.35	368.75	365.85	365.35	364.07	362.45	363.50	363.75	363.65	364.55
10.....	367.75	367.45	365.60	368.60	365.75	365.20	364.05	362.60	363.55	363.75	364.30	364.45
11.....	367.75	367.20	366.05	368.55	365.55	364.55	364.05	362.90	363.50	362.60	364.35	364.30
12.....	367.85	367.15	366.55	368.55	365.30	364.70	364.05	362.95	363.15	362.55	364.35	364.35
13.....	368.05	367.15	366.80	368.35	365.25	364.95	364.05	362.95	362.55	363.60	364.35	364.45
14.....	368.00	367.00	367.15	368.20	365.25	364.95	364.15	363.00	362.55	363.80	364.35	364.45
15.....	367.95	366.90	367.45	368.10	365.25	364.95	364.00	363.05	362.55	363.85	364.35	364.50
16.....	367.85	366.65	367.45	367.85	364.90	364.85	363.95	363.37	362.55	363.85	364.25	364.45
17.....	368.05	366.55	367.35	367.60	364.75	364.90	363.85	363.47	362.55	363.30	364.45	364.35
18.....	368.25	366.40	367.15	367.50	364.95	364.75	363.80	363.50	362.55	362.77	364.45	364.30
19.....	368.70	366.20	366.95	367.30	365.05	364.70	363.75	363.47	362.60	362.55	364.40	364.25
20.....	368.80	366.10	366.70	367.10	365.05	364.75	363.80	363.45	362.70	363.25	364.45	364.25
21.....	368.95	366.00	366.55	367.00	365.05	365.05	363.85	363.45	362.85	363.95	364.45	364.00
22.....	368.95	366.05	366.30	366.80	365.15	365.15	363.70	363.47	363.95	363.95	364.45	364.25
23.....	369.05	366.35	366.25	366.60	365.15	365.10	363.70	363.43	363.85	363.95	364.40	364.30
24.....	369.05	366.25	366.25	366.50	365.15	364.15	363.65	363.20	363.75	363.93	364.60	364.30
25.....	369.05	366.15	366.50	366.30	365.15	364.30	363.65	363.33	363.80	364.05	364.55	364.20
26.....	368.95	365.93	367.60	366.25	365.15	364.40	363.60	363.47	363.75	363.75	364.45	364.45
27.....	368.75	365.75	368.60	366.25	365.50	364.43	363.45	363.35	363.50	364.27	364.35	364.35
28.....	368.65	365.75	369.60	366.20	365.75	364.45	363.50	363.30	362.75	364.35	364.35	364.20
29.....	368.35	......	369.65	366.15	365.75	364.35	363.50	363.30	363.25	364.35	364.45	364.40
30.....	368.25	......	370.00	366.05	365.65	364.43	363.35	363.30	363.55	364.25	364.25	364.40
31.....	368.05	......	370.20	......	365.40	......	363.15	363.00	......	364.20	......	364.35

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River above Dam at Baldwinsville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	375.27	377.02	375.45	377.96	375.58	374.86	374.64	372.66	373.71	373.11	374.01	374.46
2.....	375.07	376.77	375.49	377.92	375.68	374.74	374.58	372.36	373.76	373.11	374.06	374.41
3.....	375.72	376.62	375.32	377.75	375.64	374.56	374.54	372.51	373.61	373.26	374.06	374.34
4.....	376.49	376.67	375.35	377.54	375.68	374.38	374.46	372.51	373.44	373.44	374.24	374.34
5.....	376.77	376.37	375.37	377.54	375.64	374.31	374.48	372.71	373.28	373.68	373.74	374.34
6.....	376.77	376.12	375.35	377.42	375.60	374.16	374.54	372.86	373.11	373.86	373.56	374.31
7.....	377.07	376.32	375.19	377.25	375.48	373.96	374.51	372.86	373.21	373.74	373.31	374.51
8.....	377.27	376.19	375.15	377.16	375.27	374.16	374.31	373.21	373.14	373.54	373.26	374.51
9.....	377.19	376.02	375.29	376.92	375.14	374.81	374.36	373.31	372.81	373.26	373.91	374.41
10.....	376.99	375.87	375.55	376.66	374.89	373.54	374.44	373.38	372.71	373.08	374.34	374.41
11.....	376.99	375.92	375.92	376.66	374.93	374.56	374.38	373.51	372.64	373.31	374.36	374.41
12.....	377.19	375.75	376.52	376.71	374.68	374.66	374.44	373.66	372.51	373.64	374.31	374.38
13.....	377.07	375.65	376.55	376.71	374.60	374.98	374.56	373.78	372.76	373.64	374.36	374.26
14.....	377.02	375.65	376.62	376.62	374.56	375.04	374.48	373.84	372.88	373.34	374.31	374.34
15.....	377.02	375.65	*a*	376.56	374.48	375.14	374.28	373.86	373.01	373.06	374.26	374.24
16.....	377.02	375.69	*a*	376.48	374.64	375.14	374.18	373.84	373.14	372.71	374.36	374.11
17.....	377.09	375.62	*a*	376.39	375.18	375.08	374.18	373.74	373.26	372.61	374.44	374.01
18.....	377.27	375.55	*a*	376.27	375.44	375.01	374.14	373.71	373.38	372.98	374.31	373.94
19.....	377.47	375.49	375.79	376.18	375.48	374.98	374.11	373.64	373.51	373.48	374.21	373.96
20.....	377.47	375.49	375.62	376.10	375.41	374.98	374.18	373.58	373.66	373.88	374.24	373.98
21.....	377.59	375.52	375.59	375.89	375.41	374.88	374.08	373.64	373.84	374.04	374.24	374.06
22.....	377.57	375.59	375.50	375.81	375.46	374.06	373.91	373.54	374.54	372.96	374.24	374.06
23.....	377.62	375.97	375.51	375.77	375.46	373.94	373.66	373.46	374.01	374.06	374.58	373.91
24.....	377.62	375.87	375.42	375.72	375.66	375.41	373.41	373.48	373.76	374.01	374.51	373.94
25.....	377.55	375.75	375.59	375.64	375.66	374.51	373.34	373.34	373.56	373.88	374.34	374.18
26.....	377.57	375.62	376.25	375.56	375.64	374.61	372.81	373.31	373.41	374.04	374.21	374.06
27.....	377.49	375.62	377.25	375.52	375.56	374.74	372.96	373.36	373.38	374.18	374.31	374.01
28.....	377.22	375.49	377.66	375.35	375.51	374.76	373.06	373.34	373.61	374.24	374.36	374.26
29.....	377.17	......	377.96	375.35	375.38	374.76	372.98	373.48	373.61	374.16	374.56	374.24
30.....	377.07	......	378.04	375.43	375.36	374.66	372.61	373.58	373.36	374.01	374.61	374.18
31.....	377.07	......	378.00	......	375.11	......	372.66	373.66	......	373.96	......	374.18

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at Foot of Jack's Reef, Memphis, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	375.62	377.82	375.92	380.62	376.42	375.32	374.92	372.82	373.82	373.52	374.32	374.72
2.....	375.62	377.52	375.92	380.32	376.52	375.42	374.82	372.72	374.02	373.42	374.32	374.72
3.....	375.82	377.22	375.92	380.02	376.62	375.32	374.72	372.72	373.92	373.42	374.32	374.62
4.....	376.92	377.12	375.92	379.72	376.62	375.12	374.72	372.82	373.62	373.42	374.32	374.62
5.....	377.22	377.02	375.82	379.62	376.62	375.02	374.62	372.82	373.52	373.72	374.12	374.52
6.....	377.42	376.92	375.72	379.32	376.42	374.82	374.72	372.92	373.42	374.02	373.92	374.52
7.....	377.72	376.82	375.72	379.12	376.32	374.72	374.72	373.12	373.32	373.82	373.62	374.62
8.....	378.02	376.72	375.62	378.92	376.12	374.62	374.62	373.22	373.32	373.52	373.52	374.82
9.....	377.92	376.62	375.82	378.72	375.82	374.52	374.52	373.22	373.22	373.42	373.82	374.72
10.....	377.82	376.52	376.12	378.52	375.72	374.42	374.62	373.42	373.02	373.42	374.52	374.62
11.....	377.72	376.52	376.62	378.42	375.62	374.67	374.62	373.62	372.82	373.42	374.62	374.72
12.....	377.92	376.52	377.32	378.32	375.52	375.12	374.62	373.72	372.72	373.72	374.62	374.62
13.....	378.02	376.52	377.62	378.22	375.42	375.32	374.72	373.82	372.72	373.72	374.62	374.52
14.....	377.92	376.42	377.72	378.12	375.32	375.42	374.62	374.02	372.92	373.82	374.62	374.42
15.....	377.92	376.42	377.82	378.02	375.22	375.42	374.52	374.02	373.02	373.52	374.52	374.52
16.....	377.82	376.42	377.72	378.02	375.12	375.52	374.52	374.02	373.12	373.22	374.62	374.42
17.....	378.02	376.42	377.62	377.92	375.02	375.52	374.42	373.92	373.42	372.82	374.72	374.42
18.....	378.12	376.32	377.32	377.72	375.42	375.42	374.32	373.92	373.52	372.82	374.62	374.42
19.....	378.52	376.32	377.02	377.62	375.82	375.42	374.32	373.82	373.72	373.52	374.52	374.32
20.....	378.72	376.22	376.82	377.42	375.82	375.42	374.42	373.72	373.82	374.12	374.62	374.32
21.....	378.92	376.22	376.62	377.02	375.82	375.22	374.32	373.62	374.02	374.32	374.62	374.32
22.....	379.02	376.32	376.42	376.92	375.82	374.92	374.12	373.62	374.42	374.32	374.62	374.32
23.....	378.92	376.52	376.32	376.82	375.92	374.62	374.02	373.62	374.32	374.32	374.82	374.32
24.....	378.92	376.52	376.22	376.72	375.92	374.42	373.92	373.52	374.12	374.42	374.82	374.32
25.....	378.92	376.42	376.32	376.62	376.02	374.82	373.72	373.52	374.12	374.42	374.72	374.42
26.....	378.72	376.32	377.42	376.52	376.02	374.92	373.42	373.52	373.72	374.32	374.52	374.62
27.....	378.62	376.22	378.52	376.42	375.92	375.02	373.32	373.52	373.72	374.62	374.52	374.52
28.....	378.42	376.02	379.52	376.32	375.82	375.02	373.22	373.52	373.82	374.62	374.52	374.52
29.....	378.12	......	379.92	376.32	375.62	375.02	373.12	373.62	373.92	374.42	374.42	374.62
30.....	378.02	......	380.42	376.32	375.52	375.02	373.02	373.72	373.72	374.42	374.42	374.52
31.....	377.92	......	380.62	......	375.42	......	372.92	373.82	......	374.42	......	374.52

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at Cross Lake, Jordan, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	375.69	377.94	376.19	381.04	376.79	376.59	375.09	372.79	373.99	373.64	374.39	374.89
2.....	375.84	377.69	376.19	380.84	376.89	376.69	375.04	372.79	374.09	373.39	374.34	374.89
3.....	376.09	377.59	376.09	380.64	376.89	376.54	374.89	372.84	373.94	373.54	374.59	374.89
4.....	377.09	377.44	376.09	380.34	376.89	376.34	374.89	372.89	373.79	373.74	374.44	374.79
5.....	377.49	377.29	376.19	380.19	376.89	376.19	374.79	372.99	373.64	373.94	374.29	374.79
6.....	377.64	377.14	376.19	379.94	376.79	376.04	374.89	373.09	373.49	374.09	374.09	374.79
7.....	378.04	376.99	376.04	379.74	376.89	375.89	374.74	373.24	373.44	373.99	373.84	374.84
8.....	378.24	376.99	375.89	379.44	376.89	375.79	374.79	373.34	373.49	373.84	373.69	374.94
9.....	378.19	376.99	376.04	379.29	376.99	375.74	374.74	373.49	373.34	373.64	374.09	374.89
10.....	378.19	376.89	376.49	379.09	376.89	375.64	374.79	373.59	373.19	373.49	374.74	374.89
11.....	378.29	376.89	377.09	378.89	376.79	375.94	374.79	373.69	372.94	373.54	374.79	374.89
12.....	378.29	376.79	377.64	378.89	376.69	376.34	374.79	373.84	372.79	373.84	374.89	374.79
13.....	378.29	376.69	377.84	378.89	376.64	376.34	374.89	373.94	372.89	373.94	374.89	374.69
14.....	378.29	376.69	378.09	378.79	376.49	375.69	374.84	374.09	372.99	373.79	374.79	374.69
15.....	378.29	376.69	378.19	378.69	376.39	375.69	374.64	374.09	373.14	373.54	374.79	374.69
16.....	378.19	376.69	378.04	378.49	376.49	375.64	374.59	373.99	373.29	373.24	374.89	374.64
17.....	378.29	376.69	377.84	378.34	376.74	375.69	374.59	373.99	373.44	372.94	374.89	374.54
18.....	378.54	376.59	377.54	378.09	376.89	375.69	374.49	373.99	373.64	373.14	374.79	374.49
19.....	378.99	376.49	377.24	377.89	376.99	375.59	374.49	373.99	373.84	373.64	374.79	374.49
20.....	379.14	376.44	377.04	377.69	377.09	375.49	374.54	373.94	373.99	374.14	374.79	374.49
21.....	379.29	376.49	376.89	377.49	377.09	375.44	374.44	373.84	374.14	374.29	374.89	374.49
22.....	379.39	376.59	376.74	377.39	377.09	375.04	374.24	373.79	374.49	374.39	374.89	374.49
23.....	379.39	376.74	376.64	377.29	377.14	374.64	374.09	373.69	374.39	374.39	374.89	374.59
24.....	379.29	376.79	376.49	377.09	377.19	374.84	373.94	373.69	374.24	374.44	374.99	374.64
25.....	379.19	376.64	376.79	376.99	377.29	374.99	373.74	373.69	374.04	374.39	374.89	374.79
26.....	379.09	376.49	377.94	376.89	377.29	374.99	373.54	373.59	373.84	374.34	374.79	374.84
27.....	378.94	376.39	379.19	376.79	377.29	375.09	373.49	373.59	373.69	374.69	374.74	374.69
28.....	378.64	376.29	380.14	376.79	377.09	375.19	373.39	373.59	373.79	374.69	374.69	374.74
29.....	378.44	......	380.64	376.69	376.94	375.19	373.24	373.69	373.94	374.64	374.69	374.79
30.....	378.29	......	381.04	376.69	376.79	375.19	373.04	373.79	373.74	374.59	374.74	374.79
31.....	378.14	......	381.24	......	376.69	......	372.59	373.89	......	374.49	......	374.69

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at Mosquito Poin Bridge, Port Byron, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	376.25	379.25	376.85	382.95	378.15	376.45	375.45	372.85	373.95	373.55	374.35	375.05
2.....	376.35	379.05	376.95	382.75	378.15	376.45	375.35	372.85	373.95	373.45	374.25	375.05
3.....	376.85	379.05	377.15	382.45	378.25	376.35	375.15	372.85	373.85	373.45	374.55	375.05
4.....	377.85	378.85	377.25	382.15	378.25	376.15	375.05	372.95	373.75	373.55	374.55	374.95
5.....	378.45	378.75	377.05	381.95	377.95	375.95	375.05	372.95	373.65	373.85	374.35	374.85
6.....	378.65	378.75	376.95	381.65	377.75	375.85	374.95	373.05	373.45	374.05	374.05	374.85
7.....	379.05	378.75	376.75	381.35	377.55	375.75	374.95	373.15	373.35	374.15	373.85	374.85
8.....	379.35	378.65	376.55	381.15	377.35	375.55	374.95	373.35	373.25	373.95	373.65	375.05
9.....	379.15	378.65	376.75	380.95	377.15	375.45	374.95	373.45	373.15	373.75	374.05	374.95
10.....	379.05	378.65	377.25	380.55	376.95	375.35	374.95	373.65	373.05	373.45	374.45	374.95
11.....	379.15	378.55	378.15	380.55	376.75	375.55	374.95	373.65	372.95	373.35	374.85	374.85
12.....	379.55	378.45	378.65	380.55	376.65	375.85	374.85	373.75	372.85	373.75	374.85	374.75
13.....	379.45	378.25	378.95	380.35	376.55	376.05	374.85	373.95	372.85	374.05	374.95	374.75
14.....	379.45	378.15	379.25	380.35	376.45	376.05	374.85	374.15	372.95	373.75	374.95	374.75
15.....	379.45	378.05	379.35	380.25	376.25	376.05	374.75	374.15	373.05	373.45	374.85	374.65
16.....	379.35	377.95	379.25	379.95	376.15	376.05	374.75	374.05	373.35	373.25	374.85	374.65
17.....	379.55	377.85	379.05	379.75	376.45	376.05	374.65	374.05	373.45	372.85	375.05	374.55
18.....	379.95	377.65	378.75	379.45	376.65	376.05	374.55	363.95	373.55	373.05	374.95	374.55
19.....	380.35	377.55	378.45	379.35	376.75	375.95	374.55	373.85	373.75	373.45	374.85	374.55
20.....	380.65	377.45	378.25	379.15	376.65	375.85	374.65	373.85	373.85	374.25	374.85	374.45
21.....	380.95	377.45	377.95	378.85	376.65	375.95	374.55	373.85	374.05	374.35	374.95	374.45
22.....	380.95	377.45	377.75	378.65	376.65	375.55	374.35	373.75	374.55	374.45	375.05	374.65
23.....	380.95	377.45	377.55	378.45	376.75	375.15	374.15	373.75	374.45	374.55	375.05	374.65
24.....	380.85	377.45	377.45	378.25	376.85	375.15	374.05	373.65	374.15	374.55	375.05	374.55
25.....	380.75	377.35	377.95	378.15	376.85	375.35	373.85	373.55	374.05	374.55	374.95	374.55
26.....	380.45	377.25	379.55	378.05	376.85	375.45	373.75	373.45	373.85	374.55	374.85	374.65
27.....	380.35	377.05	380.85	377.85	376.85	375.55	363.55	373.55	373.65	374.75	374.75	374.75
28.....	379.95	376.95	381.95	377.85	376.85	375.55	373.45	373.65	373.65	374.65	374.75	374.85
29.....	379.65	......	382.65	377.75	376.75	375.45	373.35	373.75	373.75	374.65	374.85	374.95
30.....	379.45	......	383.05	377.85	376.65	375.45	373.15	373.75	373.65	374.55	374.75	374.95
31.....	379.35	......	383.25	......	376.45	......	373.05	373.85	......	374.45	......	374.85

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at N. Y. C. R. R. Bridge, near Fox Ridge, Savannah P. O., N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	378.40	381.20	379.00	381.05	381.00	379.40	378.15	376.95	376.90	377.20	377.70	377.80
2.....	378.55	380.95	379.05	383.70	380.90	379.45	378.00	376.95	376.85	377.15	377.70	377.80
3.....	378.75	380.90	379.30	383.45	380.90	379.53	377.88	376.90	376.85	377.15	377.70	377.75
4.....	380.20	380.75	379.52	383.25	380.70	379.30	377.85	376.85	376.85	377.20	377.70	377.75
5.....	380.60	380.62	379.32	383.10	380.52	379.20	377.95	376.85	376.82	377.15	377.55	377.75
6.....	380.75	380.95	379.05	382.98	380.35	379.05	378.02	376.85	376.90	377.15	377.42	377.80
7.....	381.05	381.20	379.18	382.82	380.15	379.00	378.00	376.85	376.85	377.20	377.52	377.80
8.....	381.20	381.35	379.30	382.65	379.98	378.95	377.95	376.78	376.85	377.20	377.62	377.75
9.....	381.30	381.20	379.05	382.48	379.88	378.95	377.95	376.75	376.78	377.15	377.72	377.80
10.....	381.35	381.10	379.45	382.35	379.72	378.95	378.00	376.75	376.90	377.20	377.80	377.80
11.....	381.20	380.95	380.40	382.35	379.60	378.95	377.98	376.78	376.88	377.22	377.80	377.75
12.....	381.38	380.72	380.80	382.30	379.60	379.00	377.92	376.80	376.80	377.25	377.80	377.70
13.....	381.50	380.70	381.10	382.30	379.52	379.00	378.00	376.82	376.75	377.25	377.88	377.70
14.....	381.50	380.55	381.32	382.20	379.38	379.00	377.80	376.85	376.72	377.20	377.80	377.75
15.....	381.48	380.35	381.35	382.12	379.35	378.95	377.65	376.85	376.82	377.18	377.80	377.70
16.....	381.38	380.12	381.32	381.95	379.35	378.88	377.60	376.82	376.90	377.12	377.80	377.65
17.....	381.55	379.95	381.15	381.75	379.30	378.72	377.55	376.80	376.90	377.22	377.80	377.65
18.....	381.95	379.75	380.85	381.60	379.30	378.65	377.62	376.80	376.90	377.42	377.80	377.65
19.....	382.35	379.60	380.68	381.50	379.28	378.60	377.65	376.78	376.85	377.55	377.80	377.65
20.....	382.65	379.50	380.38	381.25	379.20	378.60	377.55	376.82	376.90	377.72	377.85	377.52
21.....	382.80	379.50	380.22	381.05	379.20	378.58	377.15	376.85	377.28	377.82	377.78	377.42
22.....	382.78	379.55	380.05	380.92	379.30	378.50	377.00	376.75	377.37	377.85	377.85	377.52
23.....	382.72	379.65	380.00	380.82	379.30	378.45	377.02	376.80	377.30	377.85	377.85	377.55
24.....	382.62	379.58	380.00	380.72	379.30	378.38	377.15	376.80	377.30	377.60	377.85	377.55
25.....	382.42	379.42	380.30	380.62	379.25	378.35	377.15	376.80	377.30	377.50	377.85	377.55
26.....	382.25	379.25	381.90	380.52	379.25	378.35	377.08	376.82	377.30	377.82	377.85	377.60
27.....	382.05	379.12	382.70	380.40	379.25	378.40	377.00	376.90	377.25	377.90	377.85	377.60
28.....	381.75	379.05	383.55	380.38	379.42	378.38	377.00	376.90	377.20	377.88	377.75	377.60
29.....	381.60	......	384.20	380.50	379.50	378.35	376.95	376.92	377.20	377.80	377.75	377.62
30.....	381.45	......	381.40	380.65	379.45	378.30	376.95	377.00	377.20	377.80	377.75	377.65
31.....	381.32	......	384.40	......	379.40	......	376.95	377.05	......	377.80	......	377.65

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at Foot of Cayuga Lake.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	381.64	384.12	382.62	385.42	383.82	*a*	381.52	381.42	*a*	381.72	381.62	381.87
2.....	381.82	*a*	*a*	385.42	383.82	382.67	381.42	381.37	381.62	381.67	381.62	381.77
3.....	381.82	383.92	382.82	385.42	383.82	382.77	381.42	381.52	381.62	381.57	381.67	381.62
4.....	382.57	383.82	382.52	385.52	*a*	382.67	*a*	381.42	381.52	381.62	381.67	381.72
5.....	*a*	383.72	382.52	385.52	383.67	382.67	381.42	381.44	381.50	381.72	381.62	381.62
6.....	382.72	383.62	382.52	*a*	383.52	382.67	*a*	381.44	381.52	381.72	381.72	381.72
7.....	382.77	383.52	382.32	385.22	383.42	382.62	381.32	381.44	381.62	381.74	381.67	381.92
8.....	382.99	383.42	382.32	385.17	383.42	*a*	381.32	381.52	381.57	381.67	382.02	381.62
9.....	383.12	*a*	*a*	385.04	383.32	382.42	381.42	381.62	381.47	381.62	381.67	381.67
10.....	383.32	383.32	382.42	385.12	383.32	382.40	381.34	381.50	381.52	381.74	382.07	381.82
11.....	383.27	383.37	382.52	385.14	*a*	382.42	381.22	381.42	381.47	382.02	381.77	381.47
12.....	*a*	383.12	382.62	384.97	383.22	382.32	381.32	381.52	381.52	*a*	381.72	381.52
13.....	383.57	383.12	382.82	*a*	383.12	382.32	*a*	381.57	381.52	381.72	381.82	381.52
14.....	383.52	383.12	382.82	384.82	383.02	382.22	381.17	381.42	381.52	381.62	381.77	381.47
15.....	383.67	383.02	382.82	384.80	383.02	382.27	381.17	381.52	381.52	381.62	381.72	381.52
16.....	383.62	*a*	*a*	384.60	382.92	382.14	381.22	381.47	381.47	*a*	381.72	381.52
17.....	383.82	382.92	382.97	384.52	382.82	382.02	381.27	381.47	381.77	381.72	381.77	381.67
18.....	383.92	382.82	383.27	384.62	*a*	382.04	381.32	381.47	381.42	381.92	381.70	381.47
19.....	384.02	382.82	383.12	384.52	382.77	381.94	381.32	381.42	381.44	*a*	381.72	381.52
20.....	384.52	382.77	382.97	*a*	382.82	381.92	*a*	381.42	381.43	381.82	381.77	381.72
21.....	384.17	382.72	383.02	384.32	382.82	381.92	381.31	381.62	*a*	381.87	381.82	*a*
22.....	384.22	382.72	382.92	384.32	382.82	381.92	381.37	381.82	381.72	381.72	381.92	381.52
23.....	384.52	*a*	*a*	384.22	382.77	381.87	381.44	381.47	381.78	382.12	*a*	381.52
24.....	384.27	382.62	382.87	384.14	382.82	381.82	381.44	381.47	381.72	381.77	381.82	*a*
25.....	384.32	382.57	*a*	384.02	*a*	381.72	381.32	381.47	381.78	381.72	381.77	*a*
26.....	384.32	382.52	384.17	383.92	382.72	381.77	381.42	381.48	381.82	381.72	381.72	381.32
27.....	384.17	382.42	384.77	*a*	382.82	381.70	381.52	381.44	381.72	381.72	*a*	381.62
28.....	384.22	382.52	385.22	383.82	382.72	381.52	381.42	381.52	381.72	381.92	381.97	*a*
29.....	384.42	......	385.52	384.02	382.62	*a*	381.42	381.57	381.67	381.82	381.72	381.62
30.....	384.17	......	*a*	383.87	382.72	381.52	381.43	381.52	381.62	381.67	*a*	381.52
31.....	384.22	......	385.42	......	382.72	......	381.42	381.52	......	381.72	......	381.67

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Cayuga Lake at Ithaca, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	*a*	384.25	382.60	385.75	384.03	*a*	*a*	*a*	381.67	*a*	381.95	381.80
2.....	382.07	384.05	*a*	385.65	384.00	382.97	*a*	381.63	381.67	381.90	381.83	381.81
3.....	382.95	383.95	382.63	385.57	383.93	382.96	*a*	381.54	381.70	381.95	381.83	381.93
4.....	382.75	383.90	382.68	385.51	383.86	382.91	*a*	381.69	381.68	381.89	381.83	381.88
5.....	382.75	383.90	382.65	385.62	383.81	382.84	*a*	381.60	381.70	381.82	381.77	381.85
6.....	382.75	383.81	382.68	*a*	383.79	382.63	*a*	381.53	381.68	381.81	381.73	381.85
7.....	383.15	383.73	382.54	385.53	383.75	382.71	381.90	381.61	381.66	381.81	381.70	381.75
8.....	383.50	383.60	382.65	385.45	383.71	382.60	381.75	381.57	381.74	381.85	381.55	381.90
9.....	383.31	*a*	382.38	385.41	383.63	382.64	381.65	381.51	381.76	381.79	381.70	381.73
10.....	383.29	383.57	382.64	385.15	383.61	382.67	381.67	381.58	381.65	381.80	381.70	381.69
11.....	383.41	383.41	382.75	385.11	383.55	382.52	381.65	381.55	381.62	381.80	381.83	381.80
12.....	383.68	383.45	382.75	385.25	383.39	382.55	381.50	381.60	381.60	*a*	381.83	381.71
13.....	383.64	383.34	382.76	385.18	383.37	382.55	381.50	381.55	381.75	382.05	381.84	381.73
14.....	283.77	383.33	382.91	385.15	383.29	382.55	*a*	381.60	381.70	381.93	382.00	*a*
15.....	383.72	383.23	382.96	385.05	383.21	382.47	381.55	381.00	381.59	381.85	381.97	381.67
16.....	383.77	383.19	*a*	385.00	383.21	382.33	381.53	383.56	381.56	381.95	382.00	381.66
17.....	383.88	383.11	383.32	384.94	383.13	382.40	381.50	381.55	381.55	381.83	382.00	381.65
18.....	384.11	383.07	383.05	384.83	383.07	382.25	381.50	381.63	381.66	381.83	381.90	381.66
19.....	*a*	382.82	383.05	384.81	383.13	382.23	381.50	381.65	381.65	381.83	381.94	381.61
20.....	384.17	382.87	383.08	384.80	383.01	382.17	381.45	381.62	381.56	381.90	392.00	381.59
21.....	384.40	383.03	382.90	384.55	382.90	382.23	381.48	381.40	*a*	381.90	381.99	381.63
22.....	384.44	382.81	383.15	384.45	382.90	382.17	381.50	381.40	381.88	381.87	381.97	381.66
23.....	384.26	382.86	*a*	384.40	382.97	382.11	381.40	381.58	381.88	381.71	382.05	381.55
24.....	384.45	382.82	382.93	384.25	382.95	382.07	381.48	381.58	381.90	381.81	382.06	381.69
25.....	384.47	382.79	383.75	384.23	382.95	382.03	381.60	381.62	381.81	381.95	382.03	*a*
26.....	384.43	382.65	384.63	384.11	382.91	381.95	381.50	381.42	381.14	382.00	381.95	382.00
27.....	384.47	382.65	385.36	384.08	382.79	381.99	381.45	381.62	381.94	381.97	381.93	381.75
28.....	384.30	382.80	385.45	384.16	382.97	382.09	381.55	381.60	381.80	381.94	381.83	381.70
29.....	384.25	......	385.48	384.25	383.05	382.10	381.50	381.55	381.85	381.97	381.94	381.75
30.....	384.25	......	*a*	384.14	382.95	381.95	381.60	381.65	381.90	381.97	381.75	381.73
31.....	384.17	......	385.71	......	382.95	......	381.60	381.60	......	381.96	......	381.72

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River below Lock No. 6 at Seneca Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	392.29	392.51	391.93	*a*	392.49	392.44	392.12	392.16	391.96	392.12	392.12	392.14
2.....	392.21	392.43	391.81	*a*	392.48	392.44	392.14	392.10	391.95	392.12	*a*	392.15
3.....	392.17	392.31	391.70	*a*	392.47	392.36	392.14	*a*	391.94	392.05	392.13	392.06
4.....	392.41	392.21	391.93	*a*	*a*	392.32	*a*	392.16	391.93	392.05	392.09	392.08
5.....	392.35	392.29	391.76	*a*	392.48	392.34	392.07	392.14	391.92	*a*	392.15	392.06
6.....	392.51	392.46	391.69	*a*	392.42	392.30	*a*	392.04	391.95	392.04	392.14	392.02
7.....	392.41	392.63	*a*	*a*	392.44	392.32	392.13	392.16	391.88	392.02	392.15	*a*
8.....	*a*	392.46	*a*	*a*	392.42	*a*	392.07	392.14	392.01	391.99	392.12	392.10
9.....	*a*	392.46	*a*	*a*	392.42	392.28	392.12	392.19	392.00	392.01	*a*	392.06
10.....	392.33	392.41	*a*	*a*	392.43	392.30	392.11	*a*	392.02	392.02	392.21	392.10
11.....	*a*	392.41	*a*	*a*	*a*	392.30	392.10	392.25	392.06	392.01	392.16	392.08
12.....	392.71	392.43	*a*	*a*	392.38	392.30	392.04	392.20	391.99	*a*	392.10	392.04
13.....	392.33	392.36	*a*	*a*	392.39	392.28	*a*	392.26	392.01	392.05	392.14	392.12
14.....	392.21	392.32	*a*	*a*	392.38	392.25	392.07	392.23	*a*	392.04	392.09	*a*
15.....	392.36	392.32	*a*	*a*	392.40	*a*	392.10	392.24	392.06	392.00	392.1[illegible]	392.09
16.....	392.56	392.33	*a*	392.47	392.38	392.29	392.08	392.19	392.02	392.16	*a*	392.06
17.....	392.71	392.36	*a*	392.45	392.37	392.26	392.04	392.12	392.07	392.18	392.11	392.06
18.....	392.67	392.32	*a*	392.47	*a*	392.24	392.19	392.22	392.10	392.12	392.17	392.07
19.....	392.41	392.31	*a*	392.47	392.40	392.22	392.00	392.26	392.05	*a*	392.13	392.07
20.....	392.53	392.31	*a*	*a*	392.39	392.22	*a*	392.23	392.08	392.12	392.13	392.06
21.....	392.51	392.32	*a*	392.47	392.39	392.23	392.05	391.98	*a*	392.14	392.18	*a*
22.....	392.45	392.31	*a*	392.50	392.41	*a*	392.07	391.92	392.14	392.14	392.16	392.08
23.....	392.42	392.36	*a*	392.47	392.40	392.17	392.12	391.89	392.10	392.14	*a*	392.10
24.....	392.43	392.31	*a*	392.49	392.39	392.16	392.12	*a*	392.14	392.14	392.16	392.08
25.....	392.41	392.23	*a*	392.48	392.40	392.16	392.14	391.88	392.13	*a*	392.02	*a*
26.....	392.43	392.22	*a*	392.49	392.38	392.14	392.10	391.90	392.16	*a*	392.05	392.06
27.....	392.41	392.19	*a*	*a*	392.38	392.16	391.97	391.89	392.13	392.16	*a*	392.01
28.....	392.43	392.15	*a*	392.46	392.46	392.15	392.14	391.94	*a*	392.14	392.00	*a*
29.....	392.35	......	*a*	392.51	392.42	*a*	392.15	391.95	392.10	392.12	392.03	392.06
30.....	392.46	......	*a*	392.49	392.38	391.12	392.12	391.98	392.12	392.12	*a*	392.03
31.....	392.61	......	*a*	......	392.37	......	392.09	*a*	......	392.09	......	392.06

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River above Seneca Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	429.83	430.03	430.07	430.47	430.25	430.07	429.96	429.71	429.66	429.95	429.91	429.79
2.....	429.87	430.01	430.08	430.43	430.24	430.06	429.97	429.61	429.71	429.93	429.86	429.89
3.....	430.03	430.01	430.07	430.39	430.27	430.09	429.94	429.59	429.73	429.93	429.91	429.89
4.....	430.01	429.99	430.07	430.44	430.26	430.08	*a*	429.71	429.73	429.93	429.87	429.89
5.....	429.95	429.99	430.07	430.51	430.21	430.08	429.93	429.67	429.72	429.89	429.89	429.88
6.....	430.00	429.99	430.08	430.63	430.17	430.07	429.93	429.68	429.71	429.92	429.89	429.87
7.....	430.04	429.99	430.07	430.50	430.27	430.07	429.92	429.69	429.73	429.92	429.89	429.88
8.....	430.02	430.44	430.05	430.42	430.17	430.07	429.89	429.59	429.80	429.91	429.87	429.89
9.....	429.99	430.47	430.07	430.40	430.17	430.07	429.89	429.71	429.81	429.92	429.88	429.89
10.....	429.99	430.09	430.10	430.37	430.17	430.07	429.91	*a*	429.88	429.92	429.95	429.89
11.....	430.05	430.03	430.15	430.61	430.14	430.07	429.92	429.71	429.79	429.89	429.91	429.91
12.....	430.19	430.34	430.07	430.47	430.17	430.07	429.93	429.66	429.76	*a*	429.94	429.89
13.....	430.01	430.09	430.07	430.45	430.14	430.06	429.93	429.71	429.81	429.91	429.91	429.87
14.....	430.01	430.13	430.09	430.38	430.13	430.07	429.93	429.74	429.79	429.93	429.92	429.86
15.....	430.01	430.07	430.07	430.28	430.14	430.07	429.85	429.67	429.85	429.93	429.91	429.89
16.....	429.98	430.07	430.07	430.31	430.13	430.07	429.83	429.63	429.85	429.93	429.84	429.89
17.....	430.45	430.06	430.06	430.31	430.11	430.07	429.81	429.64	429.84	429.94	429.91	429.88
18.....	430.31	430.05	430.05	430.29	430.09	430.05	429.83	429.69	429.86	429.92	429.93	429.89
19.....	430.11	430.07	430.07	430.27	430.09	430.05	429.78	429.69	429.80	429.86	429.91	429.89
20.....	430.07	430.07	430.07	430.31	430.10	430.05	429.78	429.61	429.79	429.94	429.95	429.88
21.....	430.07	430.07	430.07	430.24	430.09	430.05	429.73	429.59	429.81	429.95	429.87	429.88
22.....	430.01	430.05	430.05	430.23	430.10	430.05	429.70	429.66	429.87	429.95	429.89	429.89
23.....	430.03	430.05	430.06	430.21	430.09	430.02	429.71	429.66	429.86	429.96	429.83	429.89
24.....	430.05	430.05	430.07	430.23	430.09	430.03	429.71	429.61	429.90	429.95	429.80	429.89
25.....	430.03	430.07	431.31	430.21	430.09	430.02	429.67	429.65	429.89	429.88	429.85	*a*
26.....	430.05	430.08	431.09	430.23	430.09	429.99	429.68	429.59	429.89	429.92	429.79	*a*
27.....	430.05	430.07	431.44	430.17	430.10	430.04	429.63	429.71	429.89	429.95	429.84	429.89
28.....	430.05	430.07	430.67	430.17	430.14	430.02	429.67	429.68	429.84	429.91	429.89	429.84
29.....	430.03	......	430.57	430.27	430.09	429.99	429.65	429.74	429.89	429.91	429.85	429.89
30.....	430.03	......	430.69	430.19	430.09	429.97	429.65	429.75	429.89	429.91	429.79	429.88
31.....	430.03	......	430.55	......	430.09	......	429.69	*a*	......	429.89	......	429.89

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River below Guard-lock, near Geneva, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	446.63	447.58	446.88	448.48	448.13	447.73	447.48	447.13	446.73	446.33	446.08	445.93
2.....	446.63	447.58	446.98	448.43	448.13	447.73	447.43	447.13	446.73	446.33	446.13	445.93
3.....	446.78	447.53	446.88	448.43	448.13	447.73	447.43	447.18	446.78	446.33	446.08	445.93
4.....	447.03	447.48	446.83	448.43	448.13	447.73	447.43	447.13	446.68	446.33	446.08	445.83
5.....	446.98	447.48	446.88	448.48	448.13	447.73	447.43	447.13	446.73	446.33	445.98	445.83
6.....	447.08	447.48	446.88	448.43	448.08	447.68	447.48	447.08	446.73	446.28	445.93	445.93
7.....	447.03	447.38	446.78	448.33	448.03	447.73	448.43	447.08	446.73	446.33	445.98	445.93
8.....	447.18	447.33	446.78	448.33	448.03	447.63	447.38	447.13	446.68	446.28	445.93	445.88
9.....	447.23	447.38	446.83	448.33	448.03	447.63	447.48	447.13	446.58	446.23	445.98	445.83
10.....	447.18	447.28	446.93	448.33	447.93	447.63	447.53	447.13	446.53	446.13	446.18	445.88
11.....	447.83	447.18	446.98	448.33	447.93	447.63	447.33	447.03	446.58	446.18	446.08	445.78
12.....	447.33	447.18	446.98	448.33	447.93	447.63	447.38	447.03	446.63	446.23	446.08	445.78
13.....	447.33	447.18	446.98	448.33	447.83	447.63	447.43	447.03	446.58	446.18	446.03	445.78
14.....	447.38	447.18	447.03	448.28	447.83	447.53	447.33	447.03	446.43	446.08	446.03	445.73
15.....	447.43	447.13	447.03	448.23	447.78	447.53	447.33	446.98	446.43	446.08	445.98	445.68
16.....	447.43	447.18	447.03	448.18	447.78	447.53	447.33	446.93	446.43	446.03	445.98	445.68
17.....	447.53	447.23	447.03	448.23	447.78	447.53	447.33	446.93	446.48	446.03	445.93	445.68
18.....	447.58	447.13	447.08	448.23	447.78	447.53	447.28	446.98	446.33	446.13	445.98	445.63
19.....	447.63	447.13	447.03	448.13	447.73	447.48	447.28	446.88	446.33	446.03	446.03	445.68
20.....	447.73	447.18	446.98	448.13	447.73	447.48	447.28	446.93	446.38	446.13	446.03	445.68
21.....	447.63	447.18	447.08	448.08	447.73	447.48	447.28	446.98	446.53	446.18	446.03	445.63
22.....	447.63	447.13	447.03	448.13	447.73	447.43	447.23	447.03	446.53	446.13	446.08	445.63
23.....	447.23	447.03	447.03	448.13	447.73	447.43	447.23	446.88	446.53	446.13	446.08	445.63
24.....	447.63	446.93	447.08	448.03	447.73	447.53	447.28	446.83	446.48	446.08	445.98	445.63
25.....	447.63	446.88	447.33	448.03	447.73	447.43	447.23	446.83	446.48	446.03	446.03	445.63
26.....	447.63	446.88	447.93	448.03	447.63	447.43	447.23	446.83	446.48	446.08	446.03	445.73
27.....	447.63	446.83	448.28	447.98	447.73	447.58	447.33	446.88	446.38	446.13	446.03	445.73
28.....	447.63	446.88	448.48	448.08	447.73	447.43	447.23	446.83	446.33	446.13	445.93	445.73
29.....	447.63	......	448.53	448.13	447.73	447.48	447.23	446.88	446.38	446.08	445.93	445.73
30.....	447.58	......	448.53	448.13	447.73	447.48	447.23	446.83	446.38	446.08	445.93	445.63
31.....	447.58	......	448.53	......	447.73	......	447.18	446.83	......	446.08	......	445.63

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River above Guard-lock, near Geneva, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	446.63	447.58	446.98	448.63	448.23	447.83	447.58	447.23	446.83	446.43	446.18	446.03
2.....	446.63	447.58	447.08	448.53	448.23	447.83	447.53	447.23	446.83	446.43	446.18	446.03
3.....	446.78	447.53	446.98	448.53	448.23	447.83	447.53	447.23	446.88	446.43	446.18	445.93
4.....	447.03	447.48	446.93	448.53	448.23	447.83	447.53	447.23	446.78	446.38	446.18	445.93
5.....	446.98	447.48	446.98	448.58	448.23	447.78	447.58	447.23	446.83	446.43	446.08	445.93
6.....	447.08	447.48	446.98	448.53	448.18	447.78	447.48	447.18	446.78	446.33	446.03	446.03
7.....	447.03	447.38	446.88	448.43	448.13	447.83	447.43	447.18	446.83	446.33	446.08	446.03
8.....	447.18	447.33	446.88	448.43	448.13	447.73	447.48	447.23	446.68	446.33	446.03	445.93
9.....	447.23	447.38	446.93	448.43	448.13	447.73	447.53	447.23	446.63	446.28	446.08	445.93
10.....	447.18	447.28	447.03	448.43	448.03	447.73	447.53	447.23	446.63	446.23	446.28	445.93
11.....	447.33	447.18	447.08	448.43	448.03	447.73	447.43	447.13	446.68	446.23	446.18	445.88
12.....	447.33	447.18	447.08	448.43	448.03	447.73	447.48	447.13	446.63	446.33	446.18	445.88
13.....	447.33	447.18	447.08	448.43	447.93	447.73	447.48	447.13	446.58	446.28	446.13	445.88
14.....	447.43	447.23	447.13	448.38	447.93	447.63	447.43	447.13	446.53	446.18	446.08	445.88
15.....	447.43	447.23	447.13	448.33	447.88	447.63	447.33	447.08	446.53	446.18	446.08	445.83
16.....	447.43	446.93	447.13	448.28	447.88	447.63	447.38	447.03	446.53	446.13	446.08	445.78
17.....	447.53	446.93	447.13	448.33	447.88	447.68	447.38	447.03	446.58	446.13	446.03	445.78
18.....	447.58	446.83	447.18	448.33	447.88	447.63	447.33	447.03	446.43	446.23	446.08	445.73
19.....	447.63	446.83	447.13	448.23	447.83	447.53	447.38	446.93	446.43	446.13	446.13	445.78
20.....	447.73	446.88	447.08	448.23	447.83	447.58	447.38	446.98	446.48	446.18	446.13	445.78
21.....	447.63	446.88	447.18	448.23	447.83	447.58	447.38	447.03	446.58	446.23	446.13	445.73
22.....	447.63	446.88	447.13	448.23	447.83	447.53	447.33	447.03	446.63	446.23	446.18	445.73
23.....	447.73	447.13	447.13	448.23	447.83	447.53	447.33	446.93	446.63	446.23	446.18	445.68
24.....	447.63	447.03	447.18	448.13	447.83	447.63	447.33	446.93	446.58	446.18	446.13	445.73
25.....	447.63	446.98	447.43	448.13	447.83	447.53	447.33	446.93	446.58	446.13	446.13	445.73
26.....	447.63	446.98	448.03	448.13	447.73	447.53	447.33	446.88	446.58	446.18	446.13	445.78
27.....	447.63	446.93	448.38	448.08	447.83	447.68	447.43	446.88	446.48	446.23	446.13	445.83
28.....	447.63	446.98	448.58	448.18	447.83	447.53	447.33	446.88	446.43	446.23	446.03	445.83
29.....	447.63	......	448.63	448.23	447.83	447.58	447.33	446.93	446.43	446.18	446.03	445.83
30.....	447.58	......	448.63	448.23	447.83	447.58	447.33	446.88	446.38	446.18	446.03	445.73
31.....	447.58	......	448.63	......	447.83	......	447.28	446.88	......	446.18	......	445.73

SENECA LAKE AT GENEVA, N. Y.

Tables were formerly published showing the elevation of water-surface of Seneca lake at the Geneva city pumping station, located about 2 miles south of Geneva on the west shore of the lake. These records were not referred to Barge canal datum, but were referred to the U. S. Geological Survey datum. This station is no longer maintained.

A table is presented showing the elevation of water-surface of Seneca lake at Geneva at various times. The data for this table was contributed by Mr. W. S. Wood, Superintendent of the Department of Public Works of Geneva.

Data of Elevation of Seneca Lake at Steamboat Landing, Geneva, N. Y.

DATE.	Geneva datum (L. V. R. R.).	U. S. G. S. datum.	Taken by.
April 11, 1900	437.28	428.65	Chas. T. Church.
Dec. 20, 1900	*434.60	425.97	Chas. T. Church.
April 24, 1901	†438.96	430.33	Chas. T. Church.
Mar. 6, 1902	437.94	429.31	Chas. T. Church.
Mar. 23, 1903	438.04	429.41	P. H. Brennan.
April 6, 1903	438.96	430.33	P. H. Brennan.
April 9, 1903	438.91	430.28	P. H. Brennan.
May 14, 1903	438.00	429.37	P. H. Brennan.
Sept. 25, 1903	437.78	429.15	P. H. Brennan.
Nov. 17, 1903	437.62	428.99	P. H. Brennan.
Jan. 15, 1904	436.50	427.87	P. H. Brennan.
Feb. 8, 1904	437.50	428.87	P. H. Brennan.
Mar. 8, 1904	438.08	429.45	P. H. Brennan.
Mar. 29, 1904	438.64	430.01	P. H. Brennan.
April 21, 1904	438.64	430.01	P. H. Brennan.
April 29, 1904	438.81	430.18	P. H. Brennan.
May 14, 1904	438.47	429.84	P. H. Brennan.
Nov. 3, 1904	436.59	427.96	P. H. Brennan.
Nov. 9, 1904	436.42	427.79	P. H. Brennan.
Dec. 6, 1904	435.77	427.14	P. H. Brennan.
Dec. 13, 1904	435.72	427.09	P. H. Brennan.
Feb. 8, 1905	435.40	426.77	P. H. Brennan.
Mar. 15, 1905	435.07	426.44	P. H. Brennan.
April 24, 1905	437.32	428.69	P. H. Brennan.
June 21, 1905	438.37	429.74	P. H. Brennan.
Sept. 13, 1905	436.31	427.68	P. H. Brennan.
Feb. --, 1909	435.14	426.51	P. H. Brennan.
July —, 1909	437.41	428.78	P. H. Brennan.
Dec. —, 1909	435.02	426.39	P. H. Brennan.

* Lowest. † Highest.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Clyde River at Clyde, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	380.74	383.09	380.89	388.44	387.74	383.82	380.32	379.99	382.29	379.69	379.99	380.06
2.....	381.10	382.24	381.14	387.94	387.49	382.62	382.64	379.82	382.44	379.74	379.89	379.96
3.....	381.19	382.44	381.19	387.59	387.22	382.46	384.39	379.84	382.32	379.76	379.84	380.39
4.....	383.29	382.34	380.94	387.49	386.96	382.12	385.56	379.94	382.19	379.84	379.99	380.24
5.....	383.74	382.19	380.94	387.79	386.82	381.69	385.99	379.99	382.49	379.82	380.02	380.09
6.....	383.59	382.04	380.89	387.84	386.42	381.51	385.76	380.02	382.24	379.69	379.84	380.14
7.....	384.29	382.24	380.79	387.69	386.22	381.42	385.74	380.39	382.29	379.64	379.82	380.22
8.....	384.89	382.24	380.94	387.49	386.16	381.34	385.74	381.14	382.29	379.69	379.79	380.39
9.....	385.14	382.14	381.14	387.29	386.14	381.26	385.84	382.06	382.52	379.69	380.02	380.49
10.....	385.19	382.09	382.79	387.14	386.04	381.22	385.84	382.42	382.34	379.64	380.56	380.06
11.....	384.79	381.89	385.00	387.19	386.04	381.29	385.82	382.36	382.06	379.64	380.69	379.96
12.....	385.04	381.74	385.64	387.14	386.02	381.62	385.79	382.29	382.36	379.64	380.52	379.84
13.....	385.59	381.74	386.24	387.56	385.94	381.24	385.56	382.32	382.69	379.62	380.44	379.89
14.....	385.79	381.74	385.64	387.44	385.94	380.99	385.62	382.29	381.99	379.72	380.34	379.89
15.....	384.99	381.69	385.29	387.24	385.86	380.94	385.72	382.24	379.84	379.72	380.32	379.89
16.....	384.09	381.59	384.89	387.09	385.82	380.82	385.72	382.29	379.74	379.69	380.24	379.94
17.....	384.84	381.39	384.19	386.96	385.74	380.59	385.74	382.24	379.76	379.66	380.16	379.94
18.....	386.34	381.34	383.04	386.84	385.72	380.26	385.22	382.22	379.94	379.69	380.14	379.89
19.....	387.74	381.19	382.74	386.74	385.76	380.24	382.74	382.36	380.34	379.74	380.14	379.89
20.....	388.04	381.14	382.64	386.66	385.66	380.26	380.19	382.32	380.36	379.82	380.16	379.84
21.....	387.34	381.44	382.49	386.64	385.56	380.26	380.54	381.74	379.84	380.02	380.34	379.74
22.....	386.74	381.74	382.29	386.64	385.52	380.24	381.54	381.94	379.80	380.02	380.29	379.69
23.....	386.04	381.89	382.04	386.64	385.66	380.24	381.49	381.92	379.82	379.94	380.29	379.76
24.....	385.44	381.54	382.14	386.62	385.79	380.22	381.39	381.84	379.86	379.92	380.39	379.94
25.....	385.09	381.39	383.34	383.62	385.76	380.24	381.34	381.76	379.84	379.96	380.24	380.16
26.....	384.59	381.09	387.64	386.59	385.59	380.36	381.42	382.04	379.79	380.12	380.19	380.06
27.....	384.14	381.04	390.79	386.56	385.39	380.49	381.76	381.86	379.72	380.22	380.12	379.82
28.....	383.79	380.94	391.99	386.66	385.62	380.64	381.69	381.89	379.66	380.22	380.04	379.89
29.....	383.44	......	391.64	387.24	386.09	380.36	381.62	382.32	379.59	380.09	380.04	379.84
30.....	383.14	......	390.39	387.69	385.94	380.29	381.74	382.34	370.66	380.04	380.14	379.84
31.....	383.09	......	389.29	......	385.76	......	381.86	382.22	......	379.99	......	379.84

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Clyde River at Geneva St., Lyons, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	391.50	392.40	390.90	396.40	395.15	391.00	389.90	390.55	390.80	390.50	390.60	391.00
2.....	391.40	392.80	390.80	395.20	394.50	391.25	389.95	390.50	390.75	390.50	390.60	390.75
3.....	391.40	391.50	390.60	394.60	393.60	391.20	390.00	390.50	390.60	390.50	390.60	390.80
4.....	393.50	391.40	390.70	396.10	393.20	390.70	390.00	390.70	390.45	390.50	390.60	390.80
5.....	393.10	391.20	390.90	396.50	392.50	390.70	390.00	390.50	390.45	390.45	390.60	390.80
6.....	393.30	391.30	391.00	395.80	392.50	390.70	390.00	390.50	390.40	390.45	390.60	390.75
7.....	395.50	391.30	390.80	395.10	392.10	390.60	390.80	390.65	390.40	390.35	390.60	390.80
8.....	396.05	391.30	390.60	394.70	391.80	390.70	390.70	390.60	390.45	390.35	390.60	391.55
9.....	394.50	391.30	394.00	394.10	391.70	390.70	390.70	390.50	390.45	390.35	390.70	390.75
10.....	393.40	391.30	396.40	393.75	391.70	390.60	390.65	390.50	390.40	390.30	391.40	390.60
11.....	393.50	391.10	396.65	394.70	391.50	390.60	390.60	390.50	390.40	390.30	391.20	390.50
12.....	393.70	391.00	396.70	396.10	391.50	390.50	390.60	390.70	390.30	390.30	391.00	390.25
13.....	393.80	391.10	396.55	395.15	391.50	390.50	390.60	390.75	390.20	390.50	391.00	390.40
14.....	394.60	391.20	395.90	394.50	391.40	390.50	390.60	390.50	390.20	390.10	390.90	390.45
15.....	393.70	391.20	390.00	393.65	391.20	390.55	390.55	390.30	390.50	390.00	390.80	390.55
16.....	393.30	391.10	394.80	393.10	391.10	390.55	390.60	390.30	390.40	390.10	390.80	390.50
17.....	396.10	391.10	393.00	392.85	391.00	390.50	390.40	390.30	390.50	390.15	390.85	390.40
18.....	398.40	391.00	392.30	392.65	391.00	390.50	390.50	390.30	390.70	390.20	390.70	390.50
19.....	399.40	391.00	392.30	392.70	391.00	390.50	390.50	390.20	390.60	390.20	390.70	390.40
20.....	398.25	391.00	392.30	392.15	391.00	390.25	390.50	390.20	390.50	390.50	390.90	390.40
21.....	397.50	391.10	392.40	392.30	391.00	390.20	390.60	390.25	390.60	390.60	390.95	390.40
22.....	396.50	391.70	392.40	392.20	391.10	390.20	390.50	390.25	390.70	390.60	390.80	390.35
23.....	395.10	391.50	392.10	392.20	391.20	390.20	390.50	390.40	390.70	390.60	390.80	390.45
24.....	395.20	391.30	392.20	392.10	391.30	390.40	390.60	390.30	390.60	390.60	391.00	390.70
25.....	394.00	391.20	395.40	392.00	391.10	390.45	390.60	390.50	390.50	390.70	390.90	390.65
26.....	393.60	391.00	400.52	391.80	390.80	390.70	390.70	390.60	390.40	390.80	390.80	390.65
27.....	393.30	391.00	402.27	391.70	390.70	390.70	390.70	390.50	390.40	391.00	390.80	390.20
28.....	392.80	391.00	402.25	392.75	391.50	390.50	390.60	390.40	390.40	390.90	390.80	390.35
29.....	392.40	......	400.35	396.50	391.50	390.20	390.60	391.00	390.40	390.80	389.70	390.35
30.....	392.40	......	398.40	396.45	391.30	389.95	390.55	391.05	390.50	390.80	388.80	390.40
31.....	392.40	......	397.20	......	391.00	......	390.55	390.90	......	390.75	......	390.35

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Ganargua Creek, North of Newark, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	409.00	409.20	408.50	411.90	412.00	408.60	408.70	408.50	408.70	408.20	404.80	408.80
2.....	409.80	409.20	408.40	411.80	411.00	408.60	408.60	408.50	408.60	408.20	408.80	408.70
3.....	409.90	409.00	408.40	412.00	410.60	408.60	408.60	408.70	408.60	408.00	408.90	408.70
4.....	410.10	409.00	408.50	413.10	410.00	408.70	408.70	408.60	408.70	408.00	408.90	408.90
5.....	410.30	408.90	408.50	413.20	410.00	408.60	408.70	408.60	408.70	408.10	408.80	408.80
6.....	410.70	408.80	408.40	413.00	409.70	408.50	408.60	408.60	408.60	408.20	408.70	408.80
7.....	410.90	409.00	408.40	412.70	409.80	408.50	408.70	408.50	408.40	408.10	408.70	408.90
8.....	411.30	409.10	408.40	412.40	408.60	408.40	408.80	408.40	408.30	408.10	408.80	408.90
9.....	411.40	409.20	408.10	412.00	409.40	408.40	408.60	408.50	408.30	408.20	408.70	408.90
10.....	411.00	409.20	407.90	412.50	409.40	408.40	408.60	408.50	408.00	408.20	408.70	408.80
11.....	410.80	409.10	407.90	412.70	409.20	408.40	408.50	408.40	408.00	408.10	408.90	408.70
12.....	411.30	409.20	407.90	412.50	409.20	408.50	408.50	408.50	408.10	408.20	408.90	408.70
13.....	412.30	409.10	408.00	412.30	409.00	408.50	408.60	408.40	408.00	408.20	408.80	408.90
14.....	412.60	408.90	408.20	412.00	409.00	408.50	408.60	408.40	408.10	408.30	408.70	408.80
15.....	412.10	408.90	408.20	411.80	408.80	408.40	408.70	408.50	408.00	408.20	408.80	408.90
16.....	411.80	408.80	408.30	411.60	408.90	408.40	408.90	408.50	408.20	408.20	408.90	408.90
17.....	412.10	408.90	408.40	411.40	408.70	408.40	408.70	408.50	408.20	408.20	408.90	408.90
18.....	413.00	408.80	408.40	411.40	408.70	408.10	408.70	408.40	408.10	408.30	408.80	408.80
19.....	412.70	408.70	408.50	411.00	408.70	408.20	408.50	408.40	408.00	408.40	409.00	408.80
20.....	412.50	408.70	408.60	410.90	408.50	408.20	408.50	408.40	407.90	408.50	409.00	408.70
21.....	412.30	408.50	408.60	410.70	408.60	408.30	408.60	408.60	408.10	408.50	408.90	408.80
22.....	412.00	408.50	408.60	410.30	408.60	408.30	408.60	408.40	408.10	408.60	408.90	408.80
23.....	411.90	408.50	408.70	410.20	408.50	408.30	408.50	408.40	408.00	408.60	408.80	408.90
24.....	411.40	408.50	410.90	410.20	408.50	408.20	408.40	408.50	408.00	408.50	408.80	408.80
25.....	411.50	408.60	412.50	410.00	408.60	408.40	408.40	408.60	408.10	408.70	408.80	408.80
26.....	411.30	408.60	414.90	410.00	408.70	408.70	408.60	408.60	408.00	408.80	408.70	408.90
27.....	410.90	408.50	416.00	410.20	408.70	408.90	408.40	408.50	408.10	408.90	408.90	408.90
28.....	410.50	408.50	416.45	410.60	408.60	408.70	408.40	408.40	408.10	408.80	408.90	408.80
29.....	410.00	......	413.65	411.70	408.50	408.90	408.50	408.60	408.20	408.80	408.80	408.90
30.....	409.70	......	412.55	413.00	408.50	408.70	408.40	408.80	408.10	408.70	408.80	408.90
31.....	409.40	......	412.00	......	408.50	......	408.40	408.80	......	408.70	......	408.80

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Ganargua Creek near Palmyra, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	423.03	422.58	422.23	423.18	422.68	422.03	422.23	422.18	422.43	421.93	422.33	422.18
2.....	422.13	422.33	422.23	422.93	422.63	421.98	422.28	422.23	422.28	422.28	422.18	422.28
3.....	422.18	422.33	422.28	423.03	422.53	422.03	422.28	422.28	422.23	422.33	422.28	422.33
4.....	424.03	422.28	423.03	423.83	422.58	422.03	422.18	422.28	422.33	422.18	422.23	422.33
5.....	422.53	422.33	422.28	423.63	422.48	421.98	422.28	422.23	422.28	422.13	422.23	422.38
6.....	423.23	422.18	422.33	423.18	422.03	421.98	422.23	422.33	422.33	422.18	422.18	422.43
7.....	424.53	422.08	422.28	423.03	422.03	421.98	422.23	422.28	422.13	422.18	422.23	422.58
8.....	423.83	422.53	422.28	422.78	422.23	422.03	422.18	422.28	422.13	422.23	422.33	422.38
9.....	423.43	422.43	421.93	422.98	422.28	421.83	422.23	422.33	422.18	422.18	422.28	422.33
10.....	422.98	422.08	424.33	422.83	422.28	422.03	422.38	422.08	422.13	422.33	422.48	422.28
11.....	423.33	421.93	423.88	423.58	422.23	422.83	422.43	422.33	422.03	422.18	422.48	422.18
12.....	424.13	422.33	423.88	423.53	422.18	422.03	422.33	422.03	422.13	422.23	422.43	422.13
13.....	423.48	422.23	423.78	423.23	422.08	421.83	422.23	421.93	422.33	422.18	422.48	422.13
14.....	423.43	422.03	423.33	422.88	422.03	422.03	422.23	421.83	422.23	422.28	422.43	422.13
15.....	422.98	422.35	423.93	422.78	422.03	421.98	422.28	422.03	422.18	422.23	422.38	422.18
16.....	423.03	422.13	423.23	422.63	422.08	422.03	422.18	422.13	422.23	422.18	422.33	422.08
17.....	424.23	422.18	422.93	422.73	422.03	421.98	422.28	422.13	422.23	422.18	422.28	421.53
18.....	425.53	422.13	422.48	422.43	422.08	422.03	422.28	422.18	422.28	422.23	422.28	422.13
19.....	424.63	422.13	422.73	422.68	422.23	422.03	422.18	422.13	422.43	422.23	422.33	422.18
20.....	424.03	422.33	422.78	422.63	422.13	422.03	422.13	422.13	422.28	422.18	422.33	422.13
21.....	424.23	422.38	422.73	422.43	422.18	422.13	422.18	422.03	422.23	422.23	422.38	422.08
22.....	423.33	422.68	422.58	422.13	422.23	422.08	422.13	422.13	422.08	422.28	422.43	422.03
23.....	423.28	422.38	422.73	422.13	422.13	422.03	422.18	422.08	422.23	422.33	422.28	422.13
24.....	423.58	422.43	422.83	422.48	422.28	422.13	422.28	422.13	422.33	422.23	422.38	422.08
25.....	423.18	422.33	424.03	422.33	422.08	422.03	422.23	422.23	422.13	422.18	422.33	422.08
26.....	422.98	422.28	427.03	422.33	421.98	422.13	422.23	422.33	422.33	422.28	422.28	422.23
27.....	422.93	422.33	427.68	422.43	421.93	422.08	422.13	422.28	422.23	422.18	422.33	422.03
28.....	422.43	422.28	425.68	423.23	422.03	422.03	422.23	422.33	422.13	422.23	422.38	422.03
29.....	422.43	......	424.18	424.48	421.93	422.08	422.18	422.38	422.23	422.18	422.28	422.03
30.....	422.53	......	423.93	423.43	422.08	422.03	422.23	422.38	422.28	422.28	422.33	422.18
31.....	422.68	......	423.63	......	421.93	......	422.23	422.33	......	422.33	......	422.13

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Canandaigua Outlet at Alloway, N. Y

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	404.82	405.82	405.12	408.22	407.82	404.72	404.52	404.12	404.12	403.52	404.02	404.12
2.....	404.72	405.72	405.02	407.62	407.42	404.72	404.52	404.12	404.12	403.52	404.12	404.02
3.....	404.92	405.72	404.92	407.32	407.02	404.72	404.52	404.12	404.12	403.52	404.02	403.92
4.....	407.12	405.72	404.92	407.62	406.82	404.72	404.52	404.12	404.12	403.52	403.82	403.92
5.....	406.12	405.52	404.92	407.82	406.42	404.72	404.52	404.12	404.12	403.52	403.72	403.92
6.....	406.22	405.22	404.92	407.42	406.32	404.72	404.52	404.12	404.02	403.52	403.72	403.92
7.....	407.02	405.12	404.92	407.32	406.22	404.72	404.42	404.02	403.92	403.62	403.92	403.92
8.....	406.92	405.12	404.92	407.22	405.92	404.72	404.32	403.92	403.92	403.72	403.92	403.92
9.....	406.32	405.02	405.42	407.12	405.82	404.72	404.32	403.92	403.92	403.72	404.02	404.02
10.....	406.02	405.02	409.52	407.12	405.72	404.72	404.32	403.92	403.92	403.72	404.12	404.12
11.....	406.22	405.32	408.37	408.02	405.72	404.72	404.32	404.02	403.72	403.62	404.12	404.12
12.....	407.72	405.32	407.82	408.02	405.52	404.72	404.32	404.12	403.52	403.52	404.12	404.12
13.....	407.22	405.32	406.92	407.22	405.32	404.72	404.32	404.12	403.52	403.52	404.12	404.02
14.....	406.42	405.32	407.02	407.02	405.32	404.72	404.32	404.12	403.47	403.62	404.12	403.92
15.....	406.32	405.42	407.12	406.92	405.32	404.72	404.32	404.12	403.42	403.72	404.12	403.92
16.....	406.32	405.72	407.12	406.82	405.32	404.62	404.22	404.12	403.52	403.92	404.12	403.92
17.....	408.32	405.62	406.42	406.52	405.12	404.52	404.12	404.12	403.52	403.92	404.12	403.92
18.....	409.52	405.52	405.92	406.32	405.12	404.52	404.12	404.12	403.52	403.92	404.12	404.12
19.....	409.72	405.32	405.92	406.32	405.12	404.52	404.12	404.12	403.52	403.92	404.22	404.12
20.....	408.22	405.42	405.92	406.32	405.02	404.52	404.12	404.02	403.52	403.92	404.32	404.12
21.....	407.42	405.52	405.92	406.22	404.92	404.52	404.12	403.92	403.52	403.92	404.32	404.02
22.....	407.32	405.52	405.62	406.12	404.92	404.52	404.12	403.82	403.52	403.92	404.32	404.02
23.....	407.12	405.52	405.52	405.92	405.12	404.52	404.22	403.72	403.52	403.92	404.32	404.12
24.....	406.72	405.32	405.52	405.92	405.12	404.52	404.32	403.72	403.52	403.92	404.22	404.32
25.....	406.52	405.22	408.52	405.72	405.12	404.52	404.22	403.82	403.52	403.92	404.12	404.32
26.....	406.52	405.12	410.72	405.62	405.12	404.52	404.12	403.92	403.52	403.92	404.02	404.32
27.....	406.32	405.12	411.12	405.52	405.12	404.52	404.12	403.92	403.52	403.92	403.92	404.32
28.....	406.02	405.12	410.52	406.32	405.12	404.72	404.12	403.92	403.52	403.92	404.12	404.32
29.....	405.62	......	409.92	408.72	404.92	404.72	404.12	404.32	403.52	403.92	404.12	404.32
30.....	405.82	......	409.42	408.42	404.82	404.62	404.12	404.22	403.52	403.92	404.12	404.32
31.....	405.92	......	408.82	......	404.72	......	404.12	404.12	......	403.92	......	404.32

SKANEATELES LAKE AND OUTLET.

Skaneateles lake outlet enters Seneca river above Cross lake, crossing the Erie canal at Jordan. The fall from the foot of the lake at this point is 465 feet.

The surface of the lake has an elevation of 865 feet above tide. The valley on each side of the lake has an average width of 2.5 miles, and in this distance there is a rise of 400 to 800 feet, the greater part of it being within a mile of the lake. The inflow to the lake is through numerous short lateral feeders flowing down these slopes. The drainage areas of the lake are shown below:

*Drainage area of Skaneateles Lake.**

	Square miles.
Land surface above State dam at Skaneateles	60.25
Water surface of lake at Skaneateles	12.75
Total drainage area above foot of lake (water surface = 17.46 per cent)	73.00
Total area above Willow Glen weir	74.25
Area above Erie canal at Jordan	93.00

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* Areas here given have been taken from proceedings in condemnation of water-powers on Skaneateles outlet. The lake and its tributary area are shown on the Skaneateles, Tully, Cortland and Moravia topographic atlas sheets of the United States Geological Survey.

SENECA RIVER.

SENECA RIVER BELOW LOCK NO. 6 AT SENECA FALLS, N. Y.

The gage was established on Seneca river below Seneca Falls on November 16, 1909, by L. S. Hulburd for this Department. The gage consists of a 5-ft. enameled steel section, fastened to a pile near the right-hand, downstream bank just above the State weir at Seneca Falls. The elevation of the zero mark of the gages is 391.42, Barge canal datum. The weir is utilized to calculate the discharge of the river at this point. The small quantity of water which is diverted around the dam by leakage through the flume of an abandoned water power has been measured and is included in the estimated flow. An estimate of the quantity of water used for canal purposes is also made from a record of the operation of the adjacent locks. The channel of approach above the weir is shallow and irregular and is obstructed by ice in the winter season. The crest of the dam is also somewhat irregular and flash-boards are usually maintained thereon. Owing to these conditions the estimate of discharge cannot be made as precise as it is desired and the record is published as approximate only and is subject to revision.

Current-meter Discharge Measurements of Seneca River at Rumsey Street Bridge, Seneca Falls, N. Y.

DATE.	Hydrographer.	Gage Reading			Meter No.	Lateral interval.	Sub-mergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
1912.						*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Jan. 31a	Duschak & Babcock..	b 4.75	b 4.75	b 4.75	462	10	0.6	529	90	259
Feb. 19a	E. A. Duschak.......	b 4.55	......	......	462	10	0.6	594	90	415
Mar. 18	E. A. Duschak.......	b 4.50	b 4.52	b 4.51	462	10	0.6	841	204	554
Mar. 29	E. A. Duschak.......	b 3.78	b 3.94	b 3.86	462	10	0.6	1,012	205	1,667
April 24	L. S. Hulburd........	b 4.30	b 4.30	b 4.30	462	10	0.6	948	204	983
June 14	L. E. Moyer.........	b 4.50	b 4.50	b 4.50	462	10	0.6	912	204	668
July 12	L. E. Moyer.........	b 4.58	b 4.58	b 4.58	462	10	0.6	863	204	564

a Ice measurement.
b Water-surface read below reference point.

Mean Daily Discharge, Second-feet, of Seneca River at Seneca Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	834	1,095	463	*a*	1,070	1,009	649	692	491	649	649	670
2.....	745	995	357	*a*	1,058	1,009	670	628	482	649	*a*	681
3.....	702	857	269	*a*	1,046	915	670	*a*	473	578	660	588
4.....	973	745	463	*a*	*a*	868	*a*	692	463	578	618	608
5.....	903	834	316	*a*	1,058	891	598	670	454	*a*	681	588
6.....	1,095	1,034	262	*a*	985	845	*a*	692	482	569	670	549
7.....	973	1,247	*a*	*a*	1,009	868	660	670	418	549	681	*a*
8.....	*a*	1,034	*a*	*a*	985	*a*	598	569	539	520	649	628
9.....	*a*	1,034	*a*	*a*	985	823	649	723	529	539	*a*	588
10.....	880	973	*a*	*a*	997	845	639	*a*	549	549	745	628
11.....	*a*	973	*a*	*a*	*a*	845	628	790	588	539	692	608
12.....	1,352	997	*a*	*a*	938	845	569	734	520	*a*	628	569
13.....	880	915	*a*	*a*	949	823	*a*	801	539	578	670	649
14.....	745	868	*a*	*a*	938	790	598	767	*a*	569	618	*a*
15.....	915	868	*a*	*a*	961	*a*	628	778	588	529	660	618
16.....	1,158	880	*a*	1,046	938	834	608	723	549	692	*a*	588
17.....	1,352	915	*a*	1,022	926	801	569	649	598	713	639	588
18.....	1,299	868	*a*	1,046	*a*	778	723	756	628	649	702	598
19.....	973	857	*a*	1,046	961	756	529	801	578	*a*	660	598
20.....	1,120	857	*a*	*a*	949	756	*a*	767	608	649	660	588
21.....	1,095	868	*a*	1,046	949	767	578	510	*a*	670	713	*a*
22.....	1,022	857	*a*	1,082	972	*a*	598	454	670	670	692	608
23.....	985	915	*a*	1,046	961	702	649	426	628	670	*a*	628
24.....	997	857	*a*	1,070	949	692	649	*a*	670	670	692	608
25.....	973	767	*a*	1,058	961	692	670	418	660	*a*	549	*a*
26.....	997	756	*a*	1,070	938	670	628	435	692	*a*	578	588
27.....	973	723	*a*	*a*	938	692	501	426	660	692	*a*	539
28.....	997	681	*a*	1,034	1,034	681	670	473	*a*	670	529	*a*
29.....	903	......	*a*	1,095	985	*a*	681	482	628	649	559	588
30.....	1,034	......	*a*	1,070	938	649	649	510	649	649	*a*	559
31.....	1,221	......	*a*	......	926	......	618	*a*	......	618	......	588
Mean..	1,003	903	......	......	975	802	632	631	568	618	650	601

a No record.

Monthly Discharge of Seneca River at Seneca Falls, N. Y.
[Drainage area, 780 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January..........	1,352	702	1,003	1.29	1.49
February..........	1,247	681	903	1.16	1.21
March..........	....	....	....	....	....
April..........	....	....	....	....	....
May..........	1,070	926	975	1.25	1.44
June..........	1,009	649	802	1.03	1.15
July..........	723	501	632	0.81	0.934
August..........	801	418	631	0.809	0.933
September..........	692	418	568	0.728	0.812
October..........	713	520	618	0.792	0.913
November..........	745	529	650	0.833	0.929
December..........	681	539	601	0.771	0.889

OWASCO OUTLET.

OWASCO OUTLET NEAR AUBURN, N. Y.

This gaging station is located on the farm of George Ridley three-quarters of a mile below the State dam at the outlet of Owasco lake and two miles below the central part of the city of Auburn. The drainage area at this point is 206 square miles.

The gage is of the Gurley automatic type. It is housed by a concrete shelter built over a concrete lined well 3½ feet square and 6 feet deep. The well is connected with the river by means of a 4-inch cast iron pipe. The gage heights are controlled by a low concrete weir located a short distance below the gage. This weir has a crest width of one foot, and both upstream and downstream faces are sloped 1 to 2. A small horizontal apron is built level with the bed of the stream, extending downstream 2½ feet from the toe of the dam. Fifty feet of the crest of the dam is built at an elevation of gage height 1.28 and 50 feet at an elevation of gage height 2.12.

Current-meter discharge measurements are made by wading directly opposite the gage and by means of a cable and car at the same section during high water.

During the winter, ice has very little effect upon the flow. There is a diversion from Owasco lake of about 10 second-feet used for the municipal water supply for the city of Auburn. It is not certain what portion of this diversion is returned to the stream above the gaging station, but investigation is now under way to determine this quantity. The maximum discharge during the flood of March, 1913, at this station was 2,750 second-feet, or 13.3 second-feet per square mile of drainage area.

This station is maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission and the Board of Water Commissioners of the city of Auburn.

Mean Daily Gage Height, in Feet, of Owasco Outlet near Auburn, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	2.29	2.98	2.26	3.90	2.28	2.19	2.11	2.03	1.99	......	1.71	1.93
2	2.31	2.89	2.28	3.80	2.28	2.18	2.03	2.00	1.98	......	1.75	1.83
3	2.53	2.79	2.34	3.67	2.34	2.17	2.04	1.65	1.86	1.82	1.84	1.87
4	2.63	2.73	2.28	3.60	2.00	2.18	1.95	2.00	1.86	1.71	1.77	1.84
5	2.67	2.67	2.30	3.56	2.28	2.19	2.08	1.95	1.85	1.75	1.83	1.86
6	2.80	2.67	2.26	3.50	2.26	2.21	1.82	1.98	1.80	1.87	1.78	1.83
7	2.93	2.51	2.31	3.43	2.11	2.17	2.01	1.96	1.89	1.83	1.81	1.88
8	2.99	2.36	2.36	3.33	2.16	2.15	2.05	1.95	1.93	1.79	1.68	1.87
9	3.07	2.30	2.33	3.23	2.18	2.18	2.03	1.85	1.87	1.80	1.89	......
10	3.14	2.29	2.34	......	2.20	2.15	2.04	1.59	1.86	1.78	1.87	......
11	3.16	2.30	2.36	3.21	2.15	2.19	1.98	1.93	1.86	1.76	1.79	......
12	3.24	2.39	2.40	3.22	2.19	2.15	1.90	1.90	1.84	1.71	1.78	......
13	3.33	2.47	2.37	3.17	2.16	2.12	1.79	1.93	......	1.91	1.83	......
14	3.32	2.39	2.46	3.12	2.14	2.21	2.02	1.95	......	1.81	1.82	......
15	3.29	2.29	2.65	3.03	2.14	1.77	2.01	1.92	......	1.80	1.72	2.03
16	3.21	2.19	2.79	2.97	2.11	2.06	2.05	1.82	......	1.79	1.82	1.96
17	3.26	2.25	2.84	2.90	2.15	2.02	2.00	1.60	......	1.78	2.02	1.97
18	3.33	2.24	2.80	2.87	2.14	1.99	2.06	1.91	......	1.72	1.85	1.95
19	3.36	2.20	2.77	2.85	2.12	2.01	2.09	1.92	......	1.74	1.88	1.90
20	3.41	2.22	......	2.78	2.14	1.99	1.92	1.89	......	1.98	1.89	1.84
21	3.37	2.20	......	2.71	2.13	1.94	2.09	1.91	......	1.86	1.89	2.03
22	3.34	2.22	......	2.60	2.18	1.53	2.04	1.88	......	......	1.81	2.09
23	3.36	2.20	......	2.56	2.12	1.93	2.09	1.85	......	1.84	1.85	1.98
24	3.29	2.27	......	......	2.13	2.02	2.03	1.64	......	1.78	1.92	1.99
25	3.27	2.22	......	2.46	1.96	2.04	1.99	1.90	......	1.75	1.87	......
26	3.23	2.26	......	2.55	2.17	2.04	2.01	1.89	......	1.91	1.87	......
27	3.17	2.25	......	2.21	2.16	2.03	1.82	1.87	......	1.91	1.79	......
28	3.11	2.26	......	2.41	2.06	1.89	2.03	1.87	......	1.83	1.93	......
29	3.08	......	......	2.28	2.13	1.54	1.99	2.02	......	1.81	1.82	......
30	3.04	......	......	2.27	2.00	2.03	2.06	1.85	......	1.81	1.85	......
31	3.03	......	......	......	2.21	......	1.97	1.86	......	1.79	......	......

NOTE.— Gage heights computed from mean of 24 hourly gage heights for each day.

Current-meter Discharge Measurements of Owasco Outlet near Auburn, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913				*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Jan. 14	C. S. De Golyer	3.44	896	5	0.2 & 0.8	278	110	1,010
Jan. 15	C. S. De Golyer	3.28	896	5	0.2 & 0.8	266	105	878
Jan. 15	C. S. De Golyer	3.28	896	5	0.2 & 0.8	263	105	879
Feb. 18	C. S. De Golyer	2.52	896	5	0.2 & 0.8	181	95	335
April 1	C. C. Covert	3.89	700	5	0.2 & 0.8	329	109	1,530
April 4	C. S. De Golyer	3.57	896	5	0.2 & 0.8	296	108	1,180
Aug. 16 *a*	G. H. Canfield	1.61	764	2	0.2 & 0.8	30	47.5	28.5

a Made by wading 60 feet below gage.

Mean Daily Discharge, Second-feet, of Owasco Outlet near Auburn, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	207	608	194	1,600	203	*168.0	149.0	132.0	109.0	......	52.9	106.0
2.....	218	*534	*196	1,470	204	174.0	129.0	119.0	117.0	......	*56.2	83.4
3.....	320	469	230	1,300	234	171.0	132.0	*36.6	91.5	78.6	80.8	95.2
4.....	367	424	203	1,220	*117	175.0	98.0	130.0	92.8	56.6	63.8	83.9
5.....	*388	391	210	1,170	209	171.0	133.0	115.0	87.4	*56.0	76.7	90.8
6.....	471	386	197	*1,110	198	181.0	*69.4	121.0	71.1	90.1	66.8	78.2
7.....	569	306	214	1,030	154	165.0	127.0	114.0	*86.3	79.6	70.2	*83.3
8.....	606	231	234	924	169	*152.0	135.0	112.0	106.0	71.6	46.8	84.6
9.....	675	*207	*216	820	172	171.0	131.0	87.1	91.9	73.3	*99.9	......
10.....	741	200	227	810	176	163.0	134.0	*26.5	87.7	67.7	89.5	......
11.....	754	207	234	803	*151	174.0	124.0	108.0	91.7	64.7	67.1	......
12.....	*830	247	249	813	175	161.0	97.7	95.8	84.1	*47.3	66.3	......
13.....	905	289	243	*763	165	154.0	*62.1	104.0	......	99.1	77.3	......
14.....	915	244	278	716	160	177.0	128.0	114.0	......	74.4	76.0	......
15.....	844	213	377	648	161	*59.8	124.0	103.0	......	74.4	56.0	......
16.....	799	*166	*464	598	150	135.0	136.0	81.1	......	70.6	*70.0	115.0
17.....	853	200	502	545	155	128.0	123.0	*28.4	......	67.3	122.0	117.0
18.....	931	189	472	522	*147	119.0	139.0	103.0	......	56.7	80.9	109.0
19.....	*955	183	452	504	153	120.0	143.0	103.0	......	*53.3	94.9	90.2
20.....	1,010	187	440	*460	158	126.0	*94.5	91.3	......	113.0	93.4	74.8
21.....	961	178	430	413	157	109.0	147.0	97.6	......	83.5	90.7	*117.0
22.....	932	180	425	351	170	*18.7	135.0	96.9	......	70.0	71.2	144.0
23.....	948	*169	*410	332	156	112.0	148.0	81.8	......	70.0	*76.2	112.0
24.....	881	204	410	265	153	126.0	131.0	*34.0	......	69.4	103.0	110.0
25.....	858	183	410	276	*107	132.0	124.0	101.0	......	60.2	83.8	......
26.....	*821	196	1,000	326	170	133.0	125.0	94.7	......	*90.2	89.8	......
27.....	765	194	2,000	*187	164	130.0	*69.1	90.4	......	99.5	67.4	......
28.....	708	197	2,700	256	139	94.2	132.0	90.1	......	77.3	105.0	......
29.....	681	......	2,750	207	156	*19.6	123.0	128.0	......	72.6	78.5	......
30.....	654	......	*2,300	205	113	132.0	137.0	79.7	......	74.2	*78.0	......
31.....	643	......	1,800	......	175	......	114.0	*78.8	......	70.9	......	......

* Sunday.

Monthly Discharge of Owasco Outlet near Auburn, N. Y.
[Drainage area, 206 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January..........................	1,010	207	716	3.48	4.01
February..........................	608	166	264	1.28	1.33
March..........................	2,750	194	660	3.20	3.69
April..........................	1,600	*187	688	3.34	3.73
May..........................	234	*107	164	0.796	0.92
June..........................	181	*18.7	135	0.655	0.73
July..........................	149	*62.1	122	0.592	0.68
August..........................	132	*26.5	93.5	0.454	0.52
September..........................	109	....	89.5	0.434	0.48
October..........................	113	*47.3	73.8	0.358	0.41
November..........................	122	46.8	78.4	0.381	0.43
December..........................	....	....	106	0.515	0.59

* Sunday.

NOTE.— Discharge, September 13 to October 2, and December 9 to 31, inclusive, estimated from elevations of Owasco lake.

CANANDAIGUA OUTLET.

DESCRIPTION.

Canandaigua lake occupies one of the elongated depressions extending in nearly a north and south direction in the central lake region of New York. The drainage tributary to the lake is chiefly short lateral streams from the steep slopes of adjacent hillsides. The outflow from the lake is regulated to some extent by gates. The lake is at elevation about 686. From the foot of the lake at Canandaigua the outlet flows a little north to Manchester, a distance of 7 miles. In this distance a fall of 100 feet occurs, which is chiefly concentrated at several water-power dams. From Manchester the stream flows easterly 12 miles and thence northeasterly 8 miles, joining Ganargua creek at Lyons to form the Clyde river. In the easterly portion of its course the stream winds with large bends through a broad sloping valley of fertile land. The fall is mostly utilized at water-power dams. The tributary drainage is moderately rolling and is interspersed with glacial kames. These are lenticular hills extending usually in a north and south direction. At Phelps, Flint creek, which is the largest tributary, enters the outlet. Flint creek drains a valley similar to the adjacent lake basins. This valley is not at present occupied by a lake, but contains an extensive swamp, reaching several miles southward from Gorham.

CANANDAIGUA OUTLET AT ALLOWAY, N. Y.

This gaging station was established September 18, 1906, by F. P. Williams for this Department. It is located at a highway bridge crossing the stream 2½ miles above Lyons. The gage has a vertical scale divided decimally and reading from zero to 10 feet. It is attached to the downstream face of the left-hand abutment of the bridge and has its zero mark at elevation 403.32. Current-meter discharge measurements are made from the downstream side of the bridge, which has a span of 95 feet between abutments.

Current-meter Discharge Measurement of Canandaigua Outlet at Alloway, N. Y.

DATE.	Hydrographer.	Gage Reading.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
1913.						*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Sept. 12	Leggett & Wallace...	0.20	0.20	0.20	360	5	0.6	161	84	33

Mean Daily Discharge, Second-feet, of Canandaigua Outlet at Alloway, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	276	602	370	1,540	1,360	248	192	108	108	34	92	108
2.....	248	566	338	1,280	1,200	248	192	108	108	34	108	92
3.....	306	566	306	1,160	1,030	248	192	108	108	34	92	80
4.....	1,078	566	306	1,280	970	248	192	108	108	34	68	80
5.....	712	496	306	1,360	824	248	192	108	108	34	56	80
6.....	748	400	306	1,200	786	248	192	108	92	34	56	80
7.....	1,042	370	306	1,160	748	248	166	92	80	44	80	80
8.....	1,006	370	306	1,125	638	248	144	80	80	56	80	80
9.....	786	338	464	1,078	602	248	144	80	80	56	92	92
10.....	676	338	2,130	1,078	566	248	144	80	80	56	108	108
11.....	748	430	1,610	1,450	566	248	144	92	56	44	108	108
12.....	1,325	430	1,360	1,450	496	248	144	108	34	34	108	108
13.....	1,125	430	1,006	1,125	430	248	144	108	34	34	108	92
14.....	824	430	1,030	1,030	430	248	144	108	30	44	108	80
15.....	786	464	1,078	1,006	430	248	144	108	26	56	108	80
16.....	786	566	1,078	970	430	220	124	108	34	80	108	80
17.....	1,580	496	824	862	370	192	108	108	34	80	108	80
18.....	2,130	532	638	786	370	192	108	108	34	80	108	108
19.....	2,240	430	638	786	370	192	108	108	34	80	124	108
20.....	1,540	464	638	786	338	192	108	92	34	80	144	108
21.....	1,200	496	638	748	306	192	108	80	34	80	144	92
22.....	1,160	496	532	712	306	192	108	68	34	80	144	92
23.....	1,078	496	496	638	370	192	124	56	34	80	144	108
24.....	934	430	496	638	370	192	144	56	34	80	124	144
25.....	862	400	1,675	566	370	192	124	68	34	80	108	144
26.....	862	370	2,720	532	370	192	108	80	34	80	92	144
27.....	786	370	2,940	496	370	192	108	80	34	80	80	144
28.....	676	370	2,620	786	370	248	108	80	34	80	108	144
29.....	532	......	2,315	1,755	306	248	108	144	34	80	108	144
30.....	602	......	2,090	1,500	276	220	108	124	34	80	108	144
31.....	638	......	1,800	......	248	......	108	108	......	80	......	144
Mean...	945	454	1,076	1,029	536	226	138	96	55	62	104	106

Monthly Discharge of Canandaigua Outlet at Alloway, N. Y.
[Drainage area, 440 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	2,240	248	945	2.15	2.48
February	602	338	454	1.03	1.07
March	2,940	306	1,076	2.44	2.81
April	1,755	496	1,029	2.34	2.61
May	1,360	248	536	1.22	1.41
June	248	192	226	0.514	0.574
July	192	108	138	0.314	0.362
August	144	56	96	0.218	0.251
September	108	26	55	0.125	0.140
October	80	34	62	0.141	0.163
November	144	56	104	0.236	0.263
December	144	80	106	0.241	0.278

IRONDEQUOIT CREEK DRAINAGE BASIN.

DESCRIPTION.

Irondequoit creek is tributary to the Irondequoit bay about six miles east of Rochester. The drainage basin of the stream is shown on the Macedon, Rochester, Honeoye and Canandaigua quadrangles of the United States Geological Survey topographic maps. The head of the stream is in Mendon pond at elevation 662 above tide. The outlet from this pond flows southeasterly, turning to the north before it reaches Fishers village. The stream flows thence in a generally northerly direction, crossing the Erie canal between Pittsford and Bushnell's Basin. At Dispatch, Thomas creek, a large tributary, enters from the east. This tributary receives a considerable amount of waste and overflow waters from the Erie canal, with which it runs parallel for several miles.

The topography of Irondequoit creek drainage basin is generally broken and irregular. The surface soil is, as a rule, very sandy and there are numerous springs and a relatively large supply of ground water, which feeds the stream and maintains a relatively uniform flow. There are a number of undrained depressions in the drainage basin. Most of these do not contain lakes, the surface water-supply being disposed of by evaporation and infiltration. Aside from marshes surrounding Mendon ponds there are several small swamp areas. There are a number of small mills and water-power developments on the stream. A gaging station was maintained on this stream near Pittsford until December 31, 1910, when it was discontinued.

Drainage Areas of Irondequoit Creek.
(From U. S. G. S. Topographic Maps.)

LOCALITY.	AREA IN SQUARE MILES.	
	Place to place.	Total.
Irondequoit creek:		
Head to Mendon	21.89	21.89
Mendon to gaging station	19.77	41.66
Gaging station to Jaeske's mill *a*	7.96	49.62
Jaeske's mill to junction with Thomas creek	13.14	62.76
Thomas creek above mouth	34.15	96.91
Thomas creek to Allen creek	7.81	104.72
Allen creek above mouth	26.56	131.28
Allen creek to lower dam *b*	6.57	137.85
Lower dam to head of bay	13.72	151.57

a Erie canal crossing. *b* Two miles below Penfield.

GENESEE RIVER DRAINAGE BASIN.

GENESEE RIVER.

DESCRIPTION.

Genesee river rises in Potter county, Pa., eight or ten miles south of the New York-Pennsylvania boundary, flows northwestward for about thirty-two miles by general course, then turns to the northeast and empties into Lake Ontario, seven miles north of Rochester. The entire length of the stream, following bends, is about 135 miles, and the drainage area is about 2,450 square miles.

In the northern counties the surface is rolling, with long, easy slopes, except along the streams, which usually lie in deep ravines, hemmed in by steep banks. On the whole there is a gradual rise away from the lakes, and in the upper half of the basin the country becomes rough and is broken by ridges, the summits of which attain elevation of from 2,000 to 2,500 feet above tide.

In the thirty-nine miles between Belmont, in central Allegany county, and Portage, in southwestern Livingston county, the fall of the water-surface is 253 feet, an average of 6.4 feet per mile. At Portage the river plunges down in three magnificent falls, and thence nearly to Mount Morris flows at the bottom of a deep gorge. From Mount Morris to Rochester the valley is broad and open and the stream is bordered by meadows subject to occasional overflow. At Rochester there is another abrupt descent over three heavy falls, amounting to about 260 feet within the city.

The series of remarkable lakes tributary to the Oswego basin is continued westward into the basin of the Genesee and includes Conesus, Hemlock, Canadice, and Honeoye lakes. These lakes serve as natural reservoirs and have inlets draining considerable areas at their upper ends. The slopes adjacent to the lakes themselves are narrow and steep and are drained by gullies and torrential brooks. The area below the lakes is rolling and the soil is rich and extensively cultivated. The areas and elevations of these lakes are shown in the following table:

Areas and Elevations of Lakes in Genesee River Basin. [a]

LAKE.	Elevation.	Water-surface area.	Drainage area.	Per cent water-surface.
	Feet.	*Square miles.*	*Square miles.*	
Hemlock lake	896	2.8	46.8	6.12
Canadice lake	1,092	0.7	12.6	5.57
Honeoye lake	800	2.5	39.6	6.41

[a] These lake basins are shown on the Honeoye, Canandaigua, Naples and Wayland topographic atlas sheets of the United States Geological Survey, from which the areas have been taken, with the exception of those for Hemlock and Canadice lakes, which are from surveys of Rochester water works.

Above all the private dams at Rochester the State formerly maintained a dam for diverting water to the Erie canal, and in the basin of Black creek, one of the upper tributaries of the Genesee from the west, are two reservoirs (Rockville and Cuba reservoirs), owned by the State, also used for the benefit of the Erie canal.

Cuba reservoir, on the Genesee-Allegheny divide, receives the drainage from a tributary area of 26.6 square miles. The storage volume is 454,000,000 cubic feet. The overflow from this reservoir enters Allegheny river. The storage water may be turned into the summit level of the abandoned Genesee Valley canal and thence into Genesee river.

Drainage Areas of Tributaries of Genesee River. [a]

NAME OF STREAM.	AREA IN SQUARE MILES.		
	Tributary.	GENESEE RIVER.	
		Above tributary.	Below tributary.
Cryder creek	43.3	99.9	143.2
Chenunda creek	30.0	181.0	210.0
Dyke's creek	68.3	214.0	282.3
Vandermark creek	21.6	301.3	322.9
Knight's creek	22.3	323.9	346.2
Phillips creek	32.3	372.8	405.1
Vancampens creek	55.7	410.4	466.1
Angelica creek	82.1	481.1	563.2
White creek	15.9	569.2	585.1
Black creek	31.1	595.5	626.6
Crawford creek	11.8	637.6	649.4
Caneadea creek	63.3	651.0	714.3
Cold creek	41.0	745.3	786.3
Rush creek	35.3	787.0	822.3
Wiscoye:			
East Coy creek	59.9	....	....
West Coy creek	48.7	833.6	942.2
Wolf creek	19.3	974.9	994.2
Silver Lake outlet	30.4	1,029.2	1,059.6
Coshaqua creek	82.0	1,059.6	1,141.6
Canaseraga creek	258.7	1,148.4	1,407.1
Beards creek	41.3	1,423.1	1,464.4
Conesus Lake outlet	88.8	1,555.5	1,643.9
Honeoye creek	262.6	1,675.9	1,938.5
Allen's creek	198.1	1,947.1	2,145.2
Black creek	211.8	2,168.5	2,380.0
Genesee river, total at mouth	....	....	2,445.6

[a] From an early report on Genesee river storage.

Water-surface Elevation Gages Maintained on Genesee and Niagara Rivers During the Year 1913.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to —
Genesee river — Rochester, Elmwood Ave	Feb. 9, 1904	P. J. Slavin	506.73	Staff	0.1 foot.	0.1 foot.
Niagara river — Tonawanda	Jan. 23, 1905	Barge canal employee	560.00	Automatic, recording.		
Erie canal —						
Tonawanda, Delaware Ave	Jan. 23, 1905	Barge canal employee	560.00	Staff	0.1 "	0.1 "
Pendleton, Change bridge	Jan. 30, 1905	Jacob Snell, Jr.	560.00	Chain	0.1 "	0.05 "

GENESEE RIVER AT ELMWOOD AVENUE, ROCHESTER, N. Y.

This station is located at the highway bridge, known locally as Elmwood avenue bridge, at the northern end of South Park, 3½ miles above the center of the city of Rochester, 4¼ miles below the mouth of Black creek (coming in from the left) and 7½ miles above the mouth of the river.

Prior to 1910 a staff gage, bolted to the downstream end of the first pier from the right-hand shore, was read once daily. From December, 1910, to date, mean gage heights have been computed from a Gurley recording gage in the pump-house immediately below the bridge on the right-hand bank. The elevation of the zero of the gage is 506.848, Barge canal datum, and 245.591, Rochester city datum.

The channel consists of smooth gravel and is considered permanent.

Discharge measurements are made from the bridge at which the staff gage is located. Prior to 1904 measurements and elevations of water-surface were taken in conjunction with the water flowing over and around Johnson-Seymour dam in the city of Rochester.

The winter flow is affected by ice for short periods, although as a rule the channel is open.

The discharge rating curve is well developed for all stages and the published data are considered good for periods of open water.

This station was maintained by the United States Geological Survey in coöperation with the New York State Barge Canal and the engineering department of the city of Rochester from 1904 to 1909; from December, 1909, it has been maintained in coöperation with the New York State Conservation Commission and the engineering department of the city of Rochester.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Genesee River at Elmwood Ave., Rochester, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	508.93	509.33	508.43	513.33	514.63	508.83	507.93	507.63	507.63	507.53	507.83	507.93
2.....	509.23	509.43	508.63	511.53	511.93	508.83	507.93	507.63	507.63	507.43	507.83	507.93
3.....	509.03	508.93	508.73	510.83	510.53	509.03	507.83	507.63	507.63	507.53	507.83	507.93
4.....	509.63	508.83	508.73	510.93	509.93	508.73	507.83	507.63	507.63	507.53	507.93	507.93
5.....	510.03	508.83	508.53	511.13	509.63	508.63	507.83	507.63	507.53	507.43	507.83	507.83
6.....	509.93	509.03	508.43	511.23	509.33	508.43	507.83	507.53	507.53	507.43	507.83	507.93
7.....	511.03	509.63	508.43	510.73	509.13	508.23	507.73	507.53	507.53	507.43	507.73	507.83
8.....	512.63	509.23	508.63	510.33	508.93	508.73	507.73	507.53	507.53	507.53	507.73	507.83
9.....	514.53	509.03	508.33	510.03	508.93	508.73	507.73	507.53	507.53	507.53	507.73	507.93
10.....	513.33	508.73	510.73	510.83	508.73	508.43	507.73	507.53	507.53	507.63	507.93	507.93
11.....	511.33	508.83	512.53	510.73	508.63	508.33	507.73	507.53	507.53	507.63	510.13	507.93
12.....	512.73	508.83	513.63	510.33	508.53	508.23	507.73	507.53	507.53	507.63	509.13	507.93
13.....	513.63	508.73	512.93	510.03	508.53	508.23	507.73	507.53	507.53	507.63	508.73	507.93
14.....	513.43	508.73	512.73	510.83	508.43	508.13	507.73	507.53	507.43	507.63	508.43	507.93
15.....	510.83	508.43	513.23	509.73	508.33	508.03	507.73	507.53	507.43	507.63	508.63	507.93
16.....	510.53	508.43	512.73	509.43	508.33	507.93	507.73	507.53	507.43	507.53	508.73	508.03
17.....	512.53	508.33	511.83	509.13	508.33	507.93	507.73	507.53	507.43	507.53	508.53	508.03
18.....	515.03	508.33	510.03	509.03	508.33	507.93	507.73	507.53	507.43	507.63	508.53	508.03
19.....	515.73	508.33	509.83	509.03	508.23	507.93	507.73	507.53	507.43	507.63	508.43	507.93
20.....	514.43	508.43	509.83	508.93	508.23	507.93	507.73	507.53	507.43	507.53	508.43	507.93
21.....	514.23	508.73	509.73	508.83	508.23	507.93	507.73	507.53	507.53	507.53	508.33	507.83
22.....	513.33	509.13	509.53	508.73	508.23	508.13	507.73	507.53	507.43	507.53	508.53	507.83
23.....	511.63	509.43	509.33	508.73	508.43	508.13	507.73	507.53	507.43	507.63	508.43	507.83
24.....	512.03	509.83	509.23	509.13	508.53	508.13	507.73	507.43	507.43	507.73	508.33	507.83
25.....	512.23	509.03	513.63	509.43	508.43	508.03	507.73	507.43	507.53	507.73	508.33	507.93
26.....	510.93	508.73	515.93	509.13	508.43	508.13	507.73	507.43	507.53	507.83	508.13	508.03
27.....	510.53	508.43	518.28	508.93	508.33	508.33	507.73	507.43	507.53	507.93	508.13	508.03
28.....	510.23	508.43	521.18	511.63	507.93	508.33	507.63	507.43	507.53	508.43	508.13	508.03
29.....	509.63	......	520.48	514.33	510.43	508.23	507.63	507.73	507.53	508.23	508.13	507.93
30.....	509.53	......	518.33	514.93	510.43	508.03	507.63	507.73	507.43	508.03	507.93	507.93
31.....	509.43	......	516.43	......	509.53	......	507.63	507.63	......	508.03	......	507.93

Mean Daily Gage Height, in Feet, of Genesee River at Elmwood Ave., Rochester, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	2.02	2.70	1.74	6.69	8.02	2.28	1.29	0.93	0.91	0.80	1.28	1.28
2.....	2.47	2.90	1.87	4.96	5.96	2.15	1.23	0.90	0.90	0.81	1.25	1.25
3.....	2.34	2.47	2.18	5.07	4.12	2.38	1.18	0.87	0.88	0.82	1.18	1.29
4.....	2.70	2.25	1.99	4.11	3.37	2.16	1.13	0.85	0.85	0.80	1.20	1.27
5.....	3.58	2.13	1.89	4.45	2.98	1.96	1.14	0.88	0.85	0.79	1.19	1.24
6.....	3.22	2.50	1.80	4.66	2.71	1.78	1.13	0.88	0.86	0.79	1.15	1.23
7.....	4.07	2.91	1.83	4.02	2.49	1.62	1.08	0.86	0.80	0.75	1.13	1.24
8.....	5.78	2.77	1.98	3.68	2.32	1.83	1.05	0.85	0.80	0.84	1.08	1.18
9.....	7.02	2.52	1.63	3.42	2.18	2.08	1.08	0.87	0.83	0.85	1.08	1.2
10.....	7.29	2.33	3.14	3.20	2.07	1.84	1.08	0.88	0.81	0.91	1.37	1.22
11.....	5.11	2.41	5.60	3.33	1.97	1.67	1.08	0.87	0.80	0.92	3.40	1.23
12.....	5.38	2.31	6.36	3.98	1.89	1.56	1.06	0.87	0.80	0.90	2.71	1.22
13.....	6.84	2.22	6.32	3.77	1.85	1.49	1.04	0.85	0.79	0.86	2.09	1.21
14.....	5.80	2.31	6.07	3.27	1.80	1.43	0.97	0.87	*a*	0.82	1.83	1.25
15.....	4.54	1.76	6.46	2.96	1.73	1.38	0.96	0.86	*a*	0.90	1.93	1.36
16.....	3.86	1.71	6.14	2.75	1.69	1.32	1.02	0.84	0.73	0.90	2.12	1.31
17.....	5.20	1.70	*a*	2.59	1.67	1.30	1.02	0.83	0.79	0.90	1.95	1.38
18.....	7.92	1.70	*a*	2.42	1.66	1.30	1.00	0.77	0.78	0.91	1.81	1.24
19.....	8.84	1.65	3.19	2.34	1.61	1.25	0.97	0.84	0.76	0.89	1.76	1.27
20.....	8.82	1.65	3.14	*a*	1.57	1.22	0.97	0.81	0.78	0.87	1.70	1.12
21.....	7.76	1.90	3.02	2.12	1.53	1.24	0.98	0.80	0.79	0.84	1.81	1.19
22.....	6.98	2.32	2.86	2.05	1.51	1.35	0.97	0.83	0.79	0.94	1.90	1.13
23.....	5.32	2.66	2.68	2.11	1.65	1.53	0.98	0.83	0.80	0.96	1.79	1.17
24.....	5.06	3.06	2.57	2.75	1.85	1.43	0.97	0.81	0.81	1.10	1.64	1.29
25.....	5.70	2.52	5.05	2.80	1.80	1.38	0.95	0.81	0.83	1.12	1.59	1.42
26.....	4.52	2.06	9.00	2.52	1.75	1.50	0.93	0.82	0.86	1.12	1.52	1.52
27.....	3.89	1.86	11.94	2.26	1.68	1.58	0.92	0.81	0.83	1.21	1.48	1.39
28.....	6.66	1.75	14.74	3.62	1.91	1.73	0.94	0.90	0.83	1.61	1.39	1.20
29.....	3.09	......	14.22	7.35	3.94	1.63	0.94	1.06	0.79	1.67	1.41	1.24
30.....	2.80	......	11.79	8.21	3.45	1.42	0.93	0.97	0.77	1.44	1.34	1.25
31.....	2.69	......	9.54	......	2.69	......	0.94	0.91	......	1.30	......	1.27

9

a No record.

NOTE.— Gage heights affected by ice, February 6 to 20, inclusive. Computed from mean of 24 hourly gage heights for each day. Gage heights for March 28 and 29 computed from hourly gage heights observed by an employee of the Rochester Railway and Light Co.

Current-meter Discharge Measurements of Genesee River at Elmwood Avenue, Rochester, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Jan. 23	C. S. De Golyer............	5.28	896	10	0.2 & 0.8	2,590	367	8,860
Feb. 19 *a*	C. S. De Golyer............	1.72	896	10	0.2 & 0.8	1,208	377	963
Mar. 30	C. C. Covert...............	11.98	700	10	Surface velocity	5,080	373	31,800
Mar. 30	C. C. Covert...............	11.31	700	10	Surface velocity	4,680	373	27,500
April 3	C. S. De Golyer............	4.03	896	10	0.2 & 0.8	2,070	366	5,620
April 26	C. S. De Golyer............	2.51	896	10	0.2 & 0.8	1,490	356	2,480
May 1	R. S. Barnes...............	1.32	897	10	0.2 & 0.8	1,000	333	589

a Measurement at 500 feet above gage under ice cover.

Mean Daily Discharge, Second-feet, of Genesee River at Elmwood Ave., Rochester, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1,630	2,820	1,200	13,100	17,300	2,070	598	271	257	190	587	587
2.....	2,410	3,190	1,400	8,020	10,900	1,840	532	250	250	196	554	554
3.....	2,170	2,410	1,900	8,320	5,840	2,240	480	232	238	202	480	598
4.....	2,820	2,020	1,580	5,820	4,120	1,860	432	220	220	190	500	576
5.....	4,570	1,810	1,420	6,670	3,340	1,530	442	238	220	186	490	542
6.....	3,810	1,700	1,290	7,220	2,840	1,260	432	238	226	186	451	532
7.....	5,720	1,590	1,340	5,600	2,440	1,030	387	226	190	170	432	542
8.....	10,300	1,470	1,570	4,790	2,140	1,340	362	220	190	214	387	480
9.....	14,100	1,380	1,040	4,220	1,900	1,730	387	232	208	220	387	521
10.....	14,900	1,300	3,650	3,770	1,710	1,350	387	238	196	257	692	532
11.....	8,430	1,220	9,820	4,030	1,550	1,100	387	232	190	264	4,180	521
12.....	9,180	1,170	12,100	5,500	1,430	942	370	232	190	250	2,840	510
13.....	13,500	1,130	12,000	5,000	1,360	846	353	220	186	226	1,740	554
14.....	10,400	1,300	11,200	3,910	1,290	768	299	232	178	202	1,340	564
15.....	6,900	1,100	12,400	3,300	1,180	705	292	226	170	250	1,490	622
16.....	5,210	1,040	11,400	2,910	1,130	633	336	214	162	250	1,790	705
17.....	8,680	1,010	7,800	2,620	1,100	610	336	208	186	250	1,520	656
18.....	16,900	980	5,600	2,320	1,080	610	320	178	182	257	1,300	576
19.....	20,000	963	3,750	2,170	1,010	554	299	214	174	244	1,230	521
20.....	19,900	950	3,650	1,980	956	521	299	196	182	232	1,140	490
21.....	16,400	1,440	3,420	1,790	900	542	306	190	186	214	1,300	432
22.....	13,900	2,140	3,110	1,680	874	668	299	208	186	278	1,440	470
23.....	9,020	2,750	2,780	1,780	1,070	900	306	208	190	292	1,270	490
24.....	8,290	3,490	2,590	2,910	1,360	768	299	196	196	405	1,060	521
25.....	10,100	2,500	8,260	3,000	1,290	705	285	196	208	423	984	755
26.....	6,850	1,700	20,500	2,500	1,210	860	271	202	226	423	887	984
27.....	5,290	1,380	30,900	2,030	1,110	970	264	196	208	510	833	610
28.....	13,000	1,210	41,000	4,660	1,460	1,180	278	259	208	1,010	718	542
29.....	3,550	......	39,100	15,100	5,410	1,040	278	370	186	1,100	742	554
30.....	3,000	......	30,300	17,900	4,280	755	271	299	178	780	656	576
31.....	2,800	......	22,300	......	2,800	......	278	257	......	610	......	598
Mean...	8,830	1,680	10,000	5,150	2,790	1,060	350	229	199	338	1,110	571

NOTE.— Daily discharge interpolated, March 17 and 18, April 20, and September 14 and 15.

Monthly Discharge of Genesee River at Elmwood Ave., Rochester, N. Y.
[Drainage area, 2,360 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	20,000	1,630	8,830	3.74	4.31
February	3,490	950*a*	1,680	0.712	0.74
March	41,000	1,040	10,000	4.24	4.89
April	17,900	1,680	5,150	2.18	2.43
May	17,300	874	2,790	1.18	1.36
June	2,240	521	1,060	0.449	0.50
July	598	264	350	0.148	0.17
August	370	178	229	0.097	0:11
September	257	162	199	0.084	0.09
October	1,100	170	338	0.143	0.16
November	4,180	387	1,110	0.47	0.52
December	984	432	571	0.242	0.28

a Estimated.

GENESEE RIVER AT JONES BRIDGE, NEAR MT. MORRIS, N. Y.

This gaging station is at the highway bridge known as Jones bridge, crossing the Genesee river a short distance below the mouth of Canaseraga creek. It is located about 5 miles downstream from Mt. Morris. The station was established May 22, 1903, by Robert E. Horton and was maintained by the U. S. Geological Survey in coöperation with this Department until April 30, 1906, when it was discontinued. It was reëstablished August 12, 1908, in coöperation with the State Water Supply Commission. The bed of the stream is clay and is smooth and fairly permanent. The stream flows in one channel during low water and overflows the adjacent flood plains at high stages. The current is sluggish in very low water.

Current-meter measurements are made from a foot bridge erected on the outriggers on the downstream side of the bridge. The stream freezes over to some extent in winter and is at times obstructed by needle ice. The results of gagings for the years 1903 to 1906, inclusive, may be found in the State Engineer's report for 1905, pages 645 to 649, inclusive, and in the 1906 supplement, on pages 56 to 59, inclusive.

Mean Daily Gage Height, in Feet, of Genesee River at Jones Bridge, near Mt. Morris, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	7.70	6.50	......	11.80	14.00	5.90	4.20	3.70	3.41	3.28	4.70	4.70
2.....	6.40	6.20	......	9.40	10.10	6.80	4.10	3.45	3.56	3.32	4.70	4.70
3.....	6.80	6.20	......	8.60	8.60	6.00	4.25	3.20	3.51	3.30	4.50	4.60
4.....	10.80	6.00	......	9.10	7.70	5.70	3.85	3.55	3.48	3.45	4.40	4.50
5.....	8.80	6.20	......	11.70	7.00	5.30	3.80	3.50	3.40	3.46	4.35	4.50
6.....	8.60	6.70	......	9.60	6.60	5.10	3.80	3.49	3.47	3.50	4.30	4.50
7.....	16.20	......	......	8.80	6.10	5.10	4.00	3.30	3.36	3.70	4.35	4.50
8.....	18.90	......	......	8.30	5.90	6.20	3.85	3.38	3.30	3.70	4.55	4.50
9.....	20.60	......	......	7.90	5.80	5.60	3.90	3.36	3.31	3.90	5.40	4.60
10.....	13.80	......	17.60	7.50	5.50	5.10	3.85	3.37	3.32	3.50	11.60	4.50
11.....	10.80	......	19.60	7.70	5.40	4.80	3.70	3.34	3.34	3.40	8.00	4.60
12.....	17.30	......	18.00	8.80	5.30	4.70	3.85	3.42	3.36	3.40	7.20	4.65
13.....	16.60	......	12.40	7.60	5.20	4.60	3.70	3.47	3.36	3.95	6.80	4.70
14.....	11.10	......	13.80	7.00	5.10	4.45	3.80	3.40	3.31	3.90	6.40	4.65
15.....	9.40	......	14.60	6.80	5.00	4.35	3.80	3.26	3.26	3.80	6.70	4.85
16.....	9.20	......	12.60	6.60	5.00	4.30	3.80	3.36	3.30	3.75	6.00	4.95
17.....	17.40	......	8.60	6.30	4.95	4.35	3.60	3.18	3.30	3.44	5.80	4.70
18.....	23.50	......	7.30	5.90	4.90	4.15	3.65	3.04	3.30	3.50	5.80	4.60
19.....	22.50	......	7.30	5.80	4.90	4.25	3.60	3.14	3.34	3.48	5.70	4.50
20.....	15.80	7.00	6.90	5.70	4.90	......	3.60	3.18	3.34	3.70	5.60	4.50
21.....	18.40	......	6.80	5.60	4.80	......	3.70	3.14	3.18	4.15	5.60	4.50
22.....	13.20	......	6.70	5.50	5.10	......	3.75	3.20	3.28	4.25	5.70	4.50
23.....	10.30	......	6.30	5.70	5.50	......	3.65	3.17	3.22	4.35	5.20	4.35
24.....	16.00	......	6.40	7.60	5.30	......	3.50	3.22	3.54	4.35	5.20	4.35
25.....	11.20	......	22.20	6.60	5.40	......	3.50	3.11	3.31	4.20	5.20	4.90
26.....	9.50	......	27.50	6.00	5.10	4.55	3.60	3.45	3.44	4.50	4.95	4.80
27.....	9.00	......	27.50	5.90	4.80	4.60	3.55	3.60	3.36	5.00	4.95	5.80
28.....	8.00	......	26.60	22.50	10.00	4.75	3.60	3.98	3.40	5.30	4.90	6.30
29.....	7.10	......	23.60	25.60	9.60	4.40	3.55	3.72	3.25	5.20	4.80	......
30.....	6.70	......	17.40	21.40	7.30	4.15	3.48	3.68	3.48	4.90	4.75	......
31.....	6.70	......	12.70	......	6.50	......	3.55	3.30	......	4.70	......	......

NOTE.— Gage heights affected by ice, February 5 to March 9, and December 27 to 31.

Current-meter Discharge Measurements of Genesee River at Jones Bridge, near Mt. Morris, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Feb. 20 *a*	C. S. De Golyer.....	6.96	896	5	0.2 & 0.8	526	130	1.28	672
April 28	C. S. De Golyer.....	22.62	896	5	*b*	3,160	202	4.56	14,400
June 25	C. S. De Golyer.....	4.44	896	5	0.2 & 0.8	251	90	1.86	467

a Made under complete ice cover 300 feet above gage.
b Surface velocity.

Mean Daily Discharge, Second-feet, of Genesee River at Jones Bridge, near Mt. Morris, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	2,210	1,500	......	5,020	6,760	1,180	364	198	126	98	572	572
2	1,450	1,340	......	3,330	3,820	1,670	328	136	162	106	572	572
3	1,670	1,340	......	2,790	2,790	1,230	383	82	150	102	484	528
4	4,310	1,230	......	3,120	2,210	1,060	244	160	143	136	442	484
5	2,920	......	......	4,940	1,790	860	228	148	124	138	422	484
6	2,790	......	......	3,470	1,560	760	228	146	141	148	402	484
7	8,630	......	......	2,920	1,280	760	294	102	115	198	422	484
8	11,000	......	......	2,600	1,180	1,340	244	120	102	198	506	484
9	12,500	......	......	2,340	1,120	1,010	260	115	104	260	910	528
10	6,600	......	9,840	2,090	960	760	244	117	104	148	4,870	484
11	4,310	......	11,600	2,210	910	618	198	111	111	124	2,400	528
12	9,570	......	10,200	2,920	860	572	244	129	115	124	1,910	550
13	8,970	......	5,480	2,150	810	528	198	141	115	277	1,670	572
14	4,520	......	6,600	1,790	760	463	228	124	104	260	1,450	550
15	3,330	......	7,270	1,670	710	422	228	94	94	228	1,620	641
16	3,190	......	5,640	1,560	710	402	228	115	102	213	1,230	687
17	9,660	......	2,790	1,400	687	422	172	79	102	134	1,120	572
18	15,200	......	1,970	1,180	664	346	185	58	102	148	1,120	528
19	14,200	......	1,970	1,120	664	383	172	72	111	143	1,060	484
20	8,290	672	1,730	1,060	664	383	172	79	111	198	1,010	484
21	10,600	......	1,670	1,010	618	402	198	72	79	346	1,010	484
22	6,120	......	1,620	960	760	402	213	82	98	383	1,060	484
23	3,960	......	1,400	1,060	960	422	185	77	86	422	810	422
24	8,460	......	1,450	2,150	860	442	148	86	158	422	810	422
25	4,590	......	14,000	1,560	910	463	148	68	104	364	810	664
26	3,400	......	19,200	1,230	760	506	172	136	134	484	687	618
27	3,050	......	19,200	1,180	618	528	160	172	115	710	687	......
28	2,400	......	18,300	14,200	3,750	595	172	287	124	860	664	......
29	1,850	......	15,300	17,300	3,470	442	160	204	92	810	618	......
30	1,620	......	9,660	13,300	1,970	346	143	193	143	664	595	......
31	1,620	......	5,720	......	1,500	......	160	102	......	572	......	......

NOTE.— Daily discharge, June 20 to 25, interpolated.

Monthly Discharge of Genesee River at Jones Bridge, near Mt. Morris, N. Y.
[Drainage area, 1,410 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	15,200	1,450	5,900	4.18	4.82
February	....	....	881	0.625	0.65
March	19,200	....	5,840	4.14	4.77
April	17,300	960	3,450	2.45	2.73
May	6,760	618	1,520	1.08	1.24
June	1,670	346	657	0.466	0.52
July	383	143	216	0.153	0.18
August	287	58	123	0.087	0.10
September	162	79	116	0.082	0.09
October	860	98	304	0.216	0.25
November	4,870	402	1,060	0.752	0.84
December	687	422	529	0.375	0.43

NOTE.— Discharge, February 5 to March 9, inclusive, estimated from one discharge measurement and comparison with St. Helena and Rochester. Discharge, December 27 to 31, estimated by comparison with St. Helena and Rochester.

GENESEE RIVER AT ST. HELENA, N. Y.

This gaging station is located at a steel highway bridge about 6 miles above the mouth of Silver lake outlet, 9½ miles above

Canaseraga creek and 5½ miles below the village of Portageville. The drainage area at this place is 1,030 square miles.

The gage is of the chain-and-weight type, fastened to the upstream side of the middle span of the bridge and is read twice daily. Since August 24, 1911, a Gurley self-recording gage has been established a short distance downstream from the chain gage. The channel at this station is composed of gravel and rock and is of a permanent nature.

Current-meter measurements are made from the bridge during high water and during low water measurements are made by wading. The flow during the winter is slightly affected by ice. The maximum discharge during the flood of March, 1913, was somewhat in excess of 37,800 second-feet, or 36.7 second-feet per square mile of drainage area.

This station is maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Mean Daily Gage Height, in Feet, of Genesee River at St. Helena, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	3.75	3.54	3.70	5.20	4.90	3.25	2.32	2.01	2.06	2.02	2.75	2.81
2.....	3.41	2.85	3.25	4.50	4.50	3.60	2.27	2.08	2.00	2.00	2.67	2.76
3.....	3.84	2.84	3.15	4.40	4.20	3.30	2.25	1.90	1.97	2.20	2.62	2.73
4.....	4.92	2.95	2.85	4.70	3.90	3.10	2.11	2.12	1.94	2.18	2.68	2.72
5.....	4.25	2.76	2.90	5.80	3.75	2.97	2.27	2.00	1.93	1.72	2.56	2.70
6.....	4.23	2.74	2.80	4.70	3.55	2.86	2.28	2.01	1.93	2.19	2.51	2.66
7.....	6.40	2.70	2.70	4.50	3.40	3.60	2.37	2.01	1.83	2.16	2.48	2.66
8.....	7.71	2.62	2.60	4.30	3.30	3.60	2.24	2.00	1.97	2.05	2.45	2.73
9.....	6.96	2.60	2.85	4.20	3.15	3.10	2.21	2.00	1.92	1.85	2.72	2.75
10.....	5.14	4.20	6.00	4.00	3.10	2.88	2.16	1.89	1.90	2.12	5.45	2.71
11.....	5.06	4.40	6.00	4.40	3.05	2.86	2.16	2.13	1.88	1.96	4.20	2.77
12.....	7.22	4.70	5.40	4.50	3.10	2.77	2.19	2.08	1.89	2.26	3.65	2.77
13.....	5.81	......	5.38	4.10	3.00	2.62	2.17	1.99	1.87	2.40	3.46	2.75
14.....	4.69	4.48	5.82	3.85	2.88	2.54	2.23	1.99	1.87	2.11	3.77	2.78
15.....	4.29	4.46	5.88	3.80	2.94	2.52	2.19	1.98	......	2.02	3.93	2.91
16.....	4.64	4.49	4.93	3.65	2.78	2.56	2.19	1.92	......	2.09	3.63	2.90
17.....	6.98	4.61	3.95	3.50	2.84	2.36	2.15	1.87	......	1.96	3.47	2.79
18.....	8.07	4.38	3.58	3.40	2.76	2.24	2.12	1.96	......	2.15	3.39	2.74
19.....	6.62	4.40	3.67	3.30	2.68	2.22	2.14	1.98	......	1.81	3.29	2.70
20.....	5.34	4.51	3.52	3.30	2.72	2.45	2.06	1.94	......	2.35	3.53	2.56
21.....	6.48	4.81	3.51	3.10	2.68	3.20	2.23	1.95	......	2.46	3.52	2.62
22.....	5.01	4.44	3.47	2.95	3.20	2.92	2.13	1.87	......	2.61	3.36	2.62
23.....	4.60	4.27	3.22	3.30	3.15	2.72	2.12	1.99	......	2.62	3.19	2.65
24.....	6.17	3.10	3.75	4.20	3.10	......	2.06	1.88	......	2.40	3.12	2.73
25.....	4.85	3.00	11.20	3.65	3.10	2.47	2.09	2.10	......	2.59	3.06	3.06
26.....	4.36	2.85	11.20	3.40	2.98	2.61	2.19	2.01	......	2.70	2.99	2.91
27.....	4.24	2.75	10.80	3.40	3.05	2.58	2.03	2.01	......	3.64	2.93	2.73
28.....	3.89	2.70	8.10	9.50	5.40	2.56	2.17	1.89	......	3.18	2.87	2.74
29.....	3.68	......	6.20	8.00	4.50	2.40	2.06	2.08	......	2.89	2.82	2.78
30.....	3.47	......	5.50	6.00	3.80	2.42	2.14	2.07	......	2.82	2.80	2.82
31.....	3.50	......	5.40	......	3.50	......	2.07	1.89	......	2.82	......	2.87

NOTE.— Gage heights affected by ice, February 10 to 23, inclusive. Gage heights, February 7 to 12, February 24 to March 12, March 25 to July 23, October 1 to 23 and December 28 to 31, n clusive, are means of two readings per day on chain gage. From March 25 to June 23 the intake ipe of the automatic gage well was covered with gravel, rendering the automatic gage record seless. Remainder of gage heights computed from mean of 24 hourly gage heights from the utomatic gage for each day.

Current-meter Discharge Measurements of Genesee River at St. Helena, N. Y.

DATE.	Hydrographer.	Mean *e* gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Feb. 13 *a*	C. C. Covert	4.61	897	10	0.2 & 0.8	579	283	617
Feb. 21 *b*	C. S. De Golyer	4.81	896	10	0.2 & 0.8	674	280	1,220
Mar. 12	C. S. De Golyer	4.96	797	5	0.2 & 0.8	892	265	3,315
Mar. 28	C. S. De Golyer	*f* 8.41	896	10	0.2 & 0.8	2,220	314	13,400
Mar. 28	C. S. De Golyer	*f* 7.73	896	10	0.2 & 0.8	1,980	309	10,300
April 2	C. S. De Golyer	*f* 4.59	896	10	0.2 & 0.8	1,060	293	2,270
June 23 *c*	C. S. De Golyer	2.62	896	5	0.2 & 0.8	199	158	300
June 24 *c*	C. S. De Golyer	2.53	896	5	0.2 & 0.8	210	158	256
Aug. 14 *d*	G. H. Canfield	1.82	764	4	0.2 & 0.8	55.7	84	33.2
Aug. 14 *d*	G. H. Canfield	1.82	764	4	0.2 & 0.8	55	84	33
Oct. 30	R. S. Barnes	2.93	897	10	0.2 & 0.8	501	282	487

a Made under complete ice cover, 75 feet below gage. *b* Made under complete ice cover 300 feet above gage. *c* Made by wading 400 feet below gage. *d* Made by wading 150 feet above gage. *e* From automatic gage, except as noted. *f* Chain gage on bridge.

Mean Daily Discharge, Second-feet, of Genesee River at St. Helena, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	1,580	1,300	1,340	3,380	2,800	666	169	71	84	69	372	408
2	1,140	612	875	2,130	2,130	1,000	150	90	68	64	327	378
3	1,710	605	785	1,980	1,710	708	144	46	61	114	302	360
4	3,590	689	560	2,450	1,340	548	98	101	55	109	333	355
5	2,330	548	590	4,680	1,160	461	150	68	53	20	273	344
6	2,300	535	530	2,450	950	395	154	71	53	111	249	322
7	7,690	474	474	2,130	800	1,000	188	71	35	103	235	322
8	12,800	434	424	1,840	708	1,000	140	68	61	76	222	360
9	9,610	424	560	1,710	586	548	130	68	50	36	355	372
10	4,100	410	5,990	1,460	548	406	114	44	46	92	4,360	349
11	3,910	400	5,170	1,980	514	395	114	104	43	56	1,950	384
12	10,600	400	3,790	2,130	548	344	123	90	44	132	1,180	384
13	5,850	617	4,210	1,580	480	268	117	66	41	178	966	372
14	3,120	520	5,240	1,280	406	233	136	66	41	90	1,330	390
15	2,390	460	5,390	1,220	443	224	123	64	......	69	1,550	474
16	3,030	400	3,260	1,060	349	241	123	50	......	85	1,160	467
17	9,680	340	3,300	900	383	164	110	41	......	56	977	396
18	14,600	300	1,100	800	338	126	101	59	......	100	890	366
19	8,430	300	1,200	708	296	120	107	64	......	29	791	344
20	4,580	300	1,030	708	317	217	84	55	......	161	1,040	273
21	7,950	1,220	1,020	548	296	624	136	57	......	201	1,030	302
22	3,790	1,050	977	449	624	430	104	41	......	263	860	302
23	2,950	900	728	708	586	317	101	66	......	268	701	317
24	6,940	740	1,300	1,710	548	260	84	43	......	200	638	360
25	3,440	660	31,100	1,060	548	231	92	95	......	287	588	588
26	2,510	560	31,100	800	468	297	123	71	......	344	532	474
27	2,310	502	27,900	800	514	282	76	71	......	1,170	488	360
28	1,780	474	11,970	19,000	3,790	273	117	44	......	692	447	328
29	1,480	......	5,680	11,600	2,130	200	84	90	......	460	415	349
30	1,210	......	4,000	5,170	1,220	209	107	87	......	415	402	372
31	1,250	......	3,790	......	900	......	87	44	......	415	......	401

NOTE.— Daily discharge, February 10 to 23, inclusive, estimated from measurements made February 13 and February 21, and hydrograph comparison with records at Rochester. New rating table used, beginning March 13, 1913. This is probably a backwater curve up to some time during the flood, when it became the open-water curve.

Monthly Discharge of Genesee River at St. Helena, N. Y.
[Drainage area, 1,030 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	14,600	1,140	4,800	4.66	5.37
February	1,300	a300	578	0.561	0.58
March	31,100	424	5,330	5.17	5.96
April	19,000	449	2,610	2.53	2.82
May	3,790	296	917	0.89	1.03
June	1,000	120	406	0.394	0.44
July	188	76	119	0.116	0.13
August	104	41	66.6	0.065	0.07
September 1–14	....	....	50	0.049	0.05
October	1,170	20	208	0.202	0.23
November	4,360	222	832	0.808	0.90
December	588	273	373	0.362	0.42

a Estimated.

NOTE.— Discharge, September 15 to 30, inclusive, estimated by comparison with records at Jones bridge and Rochester.

CANADICE LAKE.

DESCRIPTION.

Canadice lake is tributary to Genesee river through Hemlock lake outlet and Honeoye creek. The area drained by the lake forms an irregular rectangle, the lake lying somewhat to the left of the longitudinal axis and the greater portion of the drainage being on the eastern slope. The western slope is narrow and precipitous. Bald Hill rises from an altitude of 1,090 feet at the lake to 1,800 feet at the summit and has its axis parallel to the lake at an average distance of three-fourths of a mile from it. The lake has a water-surface area of 0.7 square mile and drains a total area of 12.6 square miles, 5.6 per cent of which is lake surface.

CANADICE LAKE OUTLET NEAR HEMLOCK, N. Y.

A weir was constructed at the outlet at the foot of the lake by the city engineer's department of Rochester, N. Y., in February, 1903. The entire yield of the drainage basin passes this weir.

A standard thin-edged weir with a five-foot crest and two end contractions is so arranged with needle-timbers at the ends that during high water the length may be increased to 14.96 feet with no end contractions. The weir crest stands three feet above the stream channel and is never submerged by backwater. There are two additional rectangular gates each one foot square, with three complete contractions and a fourth partial contraction at the bottom. The outflow from the lake above the weir is controlled by gates.

A reading of the depth of the weir is taken each morning, and also for each change of the gates, the depth being read to hundredths and corrections being made for velocity of approach for the larger discharges. The discharge is calculated by the Francis formula. The record has been furnished by E. A. Fisher, city engineer, and John F. Skinner, principal assistant city engineer, of Rochester, N. Y.

Monthly Discharge of Canadice Lake near Hemlock, N. Y.
[Drainage area, 12.6 square miles.]

MONTH.	Mean elevation of lake above low water.	DISCHARGE IN SECOND-FEET.		RUN-OFF.
		Mean.	Per square mile.	Depth in inches on drainage area.
1913.				
January	2.687	47.094	3.74	4.31
February	1.275	17.637	1.40	1.46
March	1.897	33.161	2.63	3.03
April	2.912	29.264	2.32	2.59
May	2.657	19.122	1.52	1.75
June	2.517	6.859	0.544	0.607
July	2.276	6.500	0.516	0.595
August	1.500	4.529	0.359	0.414
September	0.818	4.431	0.353	0.394
October	0.341	3.737	0.297	0.342
November	0.427	3.964	0.315	0.351
December	0.389	4.016	0.319	0.368
The year	1.641	15.028	1.19	1.351

NIAGARA RIVER DRAINAGE.

GENERAL FEATURES.

Niagara river connects lakes Erie and Ontario. It receives the drainage from Tonawanda creek and adjacent smaller areas in New York.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Erie Canal above State Dam at Tonawanda, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	570.50	570.60	569.60	572.10	572.00	*a*	570.60	570.70	*a*	570.20	570.30	570.40
2.....	570.70	*a*	*a*	571.30	571.10	571.30	570.50	570.80	570.90	570.40	*a*	570.20
3.....	570.70	570.40	570.60	570.90	570.70	570.70	570.40	*a*	570.80	570.60	570.40	571.40
4.....	570.90	570.60	569.00	571.30	*a*	570.90	570.40	571.20	570.40	570.60	570.40	570.60
5.....	*a*	570.60	569.50	572.00	571.00	571.20	570.70	570.90	570.10	*a*	570.40	570.70
6.....	570.50	570.30	570.00	*a*	570.80	571.40	*a*	570.80	570.10	571.00	570.10	570.90
7.....	571.50	570.00	570.30	571.30	570.80	571.30	571.40	570.70	*a*	570.60	569.90	*a*
8.....	572.10	570.30	570.80	570.80	570.80	*a*	570.80	570.60	570.70	570.50	569.80	570.90
9.....	571.80	*a*	*a*	570.90	570.90	571.30	570.80	570.60	569.70	570.40	*a*	570.80
10.....	571.60	569.40	569.20	570.90	570.90	571.10	570.80	*a*	570.50	570.50	571.30	569.90
11.....	571.50	569.20	570.70	571.50	*a*	571.20	570.80	570.70	570.30	570.20	571.20	568.40
12.....	*a*	569.70	571.90	571.60	571.50	571.30	570.70	570.50	570.50	*a*	571.20	569.30
13.....	572.30	569.90	572.30	*a*	571.60	571.10	*a*	570.50	570.60	*a*	571.00	571.20
14.....	572.00	570.00	572.90	572.00	571.40	570.80	571.00	570.70	*a*	570.80	571.70	*a*
15.....	571.80	570.00	573.50	571.40	570.90	*a*	570.80	570.60	570.80	570.60	571.00	570.60
16.....	571.60	*a*	*a*	570.70	570.20	571.10	570.50	570.60	570.60	570.40	*a*	570.40
17.....	572.80	569.90	572.70	571.50	571.50	570.80	570.50	*a*	570.70	570.20	570.30	570.90
18.....	574.00	570.00	571.50	571.00	*a*	570.50	570.70	571.00	570.70	570.30	570.20	569.20
19.....	*a*	569.70	571.40	571.00	570.80	570.50	570.90	570.50	570.50	*a*	570.60	570.00
20.....	573.90	570.00	571.50	*a*	570.20	570.70	*a*	570.20	570.60	570.50	571.50	570.30
21.....	573.50	570.30	571.50	570.70	570.80	570.70	571.20	570.70	*a*	571.20	570.70	*a*
22.....	573.10	570.70	571.60	571.10	570.20	*a*	570.80	570.60	571.20	570.60	571.30	566.50
23.....	572.60	*a*	*a*	571.30	570.50	571.00	570.70	570.80	571.00	570.20	*a*	566.00
24.....	573.20	570.80	571.40	571.70	570.90	570.70	570.70	*a*	570.50	570.20	571.80	566.80
25.....	572.60	570.70	572.50	571.70	*a*	570.70	570.70	571.40	570.20	570.20	570.50	*a*
26.....	*a*	570.40	573.80	571.80	570.60	570.60	570.50	570.90	570.10	*a*	570.40	565.80
27.....	571.70	569.80	574.20	*a*	570.60	570.70	*a*	571.40	570.20	570.50	*a*	566.50
28.....	571.30	569.80	574.30	572.60	571.60	570.70	571.00	570.70	*a*	570.00	570.30	*a*
29.....	570.70	......	574.00	572.50	571.60	*a*	570.60	570.80	570.70	570.60	570.40	565.20
30.....	570.90	......	*a*	572.50	*a*	570.90	570.80	570.90	570.40	570.30	*a*	566.90
31.....	570.60	......	572.50	......	570.60	......	570.60	*a*	......	570.20	......	566.70

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Erie Canal at Change Bridge, Pendleton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	570.50	571.00	570.90	571.90	572.05	571.00	570.60	570.60	570.75	570.20	571.00	569.90
2.....	570.85	570.70	571.00	571.05	571.10	571.00	570.55	570.70	571.00	570.10	570.90	571.00
3.....	571.00	570.20	571.10	570.85	570.75	570.50	570.50	571.10	570.90	570.50	570.75	571.10
4.....	570.60	570.00	571.10	572.00	570.85	571.00	570.50	571.00	570.30	570.40	570.70	570.50
5.....	570.00	570.30	571.00	572.10	570.80	570.95	570.70	570.60	569.90	571.00	570.60	570.40
6.....	570.70	570.20	570.90	571.50	570.75	571.20	570.80	570.60	570.00	570.80	570.50	570.30
7.....	571.50	570.20	570.50	571.00	570.75	571.30	571.00	570.55	570.00	570.50	570.90	571.00
8.....	572.20	570.30	570.50	570.70	570.75	571.20	570.50	570.50	569.90	571.00	570.80	570.50
9.....	572.10	569.50	570.40	570.70	570.85	571.00	570.70	570.85	569.70	570.80	571.00	569.70
10.....	572.00	569.25	570.50	570.90	570.90	571.20	570.65	570.70	570.10	570.50	571.60	565.60
11.....	571.90	569.30	571.35	572.10	571.45	571.10	570.60	570.50	570.30	570.00	571.50	570.00
12.....	572.80	569.30	572.55	571.80	571.55	571.00	570.50	570.55	570.40	570.80	571.20	571.40
13.....	572.70	569.20	573.50	571.20	571.75	570.90	571.00	570.60	570.50	571.00	571.30	565.60
14.....	572.50	569.50	573.40	570.70	571.25	570.70	571.05	570.70	570.65	570.60	571.50	571.00
15.....	572.60	569.60	574.50	570.70	570.15	570.95	570.60	570.65	570.50	570.50	571.30	570.50
16.....	572.70	569.60	574.30	571.20	570.35	571.00	570.50	570.60	570.30	570.40	571.10	570.40
17.....	574.70	569.60	573.55	571.20	571.45	570.70	570.65	570.65	570.50	570.00	571.40	570.00
18.....	576.10	569.65	571.50	570.90	571.00	570.30	570.80	570.70	570.45	570.90	571.00	565.60
19.....	576.25	569.80	571.70	570.90	570.85	570.35	570.90	570.30	570.30	571.00	570.80	570.50
20.....	575.20	569.90	571.50	570.70	570.50	570.70	571.00	570.45	570.40	570.50	571.70	570.00
21.....	574.70	570.60	572.00	570.70	570.40	570.65	570.85	570.40	571.00	570.30	571.80	565.60
22.....	573.40	570.70	571.50	571.05	570.20	571.00	570.80	570.60	570.90	570.00	571.50	565.60
23.....	573.50	571.00	571.00	571.55	570.30	570.85	570.75	570.70	570.80	569.90	571.70	565.60
24.....	573.50	570.90	571.40	571.30	570.70	570.60	570.80	570.60	570.75	570.00	570.80	565.60
25.....	572.80	570.80	573.60	571.50	570.50	570.70	570.70	570.70	570.00	569.80	570.20	565.60
26.....	572.30	570.90	575.00	571.50	570.20	570.70	570.60	570.90	570.20	570.00	570.10	565.60
27.....	571.80	570.90	577.00	571.45	570.50	570.75	570.90	570.80	570.00	570.20	569.80	565.60
28.....	571.30	570.90	576.20	572.80	571.50	570.60	570.88	571.00	570.20	570.40	570.20	565.60
29.....	570.80	......	575.50	572.90	571.40	570.70	570.65	571.10	570.00	570.70	570.20	565.60
30.....	570.70	......	573.50	573.05	571.20	570.50	570.60	571.00	570.05	570.50	570.10	565.60
31.....	570.70	......	572.70	......	570.40	......	570.48	570.80	......	570.40	......	565.60

LITTLE TONAWANDA CREEK.

LITTLE TONAWANDA CREEK AT LINDEN, N. Y.

This gaging station is located at the stone arch highway bridge in the village of Linden, 600 feet northeast of the Erie railroad station and 3 miles above the junction with Tonawanda creek. The drainage area at this point is 22.0 square miles.

The gage is of the vertical staff type, fastened to one of the bridge abutments. It consists of a 2-foot lower section graduated to 0.01 of a foot and an upper 4-foot section graduated to 0.05 of a foot. An auxiliary gage is also used as a check. A standard Francis weir has been constructed under the upstream side of the bridge, having a length of 2.01 feet and a notch depth of 8 inches. When the stage of the stream gets above the depth of this notch, it flows over a 2-inch plank about 13 feet long, including the 2-foot weir.

Current-meter discharge measurements are made from a cable and car 1,000 feet upstream from the bridge. During low water, measurements are made by wading.

The maximum discharge of this stream during the flood of March, 1913, was 1,300 second-feet, or 59 second-feet per square mile of drainage area.

Mean Daily Gage Height, in Feet, of Little Tonawanda Creek at Linden, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1.28	1.14	1.10	9.95	9.80	8.94	0.51	0.27	0.23	0.22	0.27	0.73
2.....	1.22	1.22	1.03	9.74	9.62	9.36	0.48	0.24	0.22	0.22	0.26	0.71
3.....	1.50	1.18	1.06	9.82	9.48	9.06	0.48	0.24	0.23	0.21	0.27	0.72
4.....	1.08	1.18	1.08	10.15	9.38	8.96	0.46	0.30	0.26	0.21	0.28	0.72
5.....	1.30	......	1.08	9.91	9.29	8.90	0.71	0.26	0.24	0.20	0.26	0.71
6.....	1.75	......	1.03	9.76	9.23	8.89	0.56	0.27	0.23	0.20	0.26	0.69
7.....	3.20	......	1.02	9.72	9.14	8.93	0.50	0.28	0.22	0.20	0.26	0.72
8.....	2.40	......	1.02	9.68	9.12	8.94	0.45	0.24	0.22	0.18	0.26	0.80
9.....	1.60	......	1.09	9.57	9.09	8.88	0.44	0.24	0.21	0.18	0.56	0.72
10.....	1.60	......	2.50	9.54	9.04	8.84	0.42	0.39	0.20	0.20	0.90	0.73
11.....	2.20	......	2.70	10.70	9.02	8.84	0.42	0.32	0.19	0.23	0.72	0.69
12.....	3.70	......	2.40	9.80	9.00	8.82	0.42	0.26	0.19	0.24	0.60	0.72
13.....	2.00	0.94	2.80	9.71	8.98	8.80	0.40	0.25	0.19	0.21	0.64	0.80
14.....	1.80	0.93	4.40	9.58	8.96	8.78	0.37	0.24	0.18	0.20	0.73	0.87
15.....	1.50	0.92	3.20	9.48	8.94	8.76	0.37	0.23	0.18	0.20	0.72	0.84
16.....	2.80	0.98	1.95	9.42	8.98	8.76	0.36	0.22	0.18	0.21	0.66	0.79
17.....	6.50	0.94	1.50	9.32	8.95	8.73	0.36	0.22	0.20	0.21	0.64	0.79
18.....	5.70	0.92	1.55	9.26	9.00	8.73	0.38	0.21	0.27	0.22	0.62	0.78
19.....	2.60	0.94	1.63	9.35	8.94	8.72	0.36	0.20	0.22	0.22	0.70	0.74
20.....	2.50	1.60	1.65	9.20	8.90	......	0.54	0.18	0.21	0.32	1.16	0.72
21.....	3.40	1.90	1.65	9.12	8.88	0.70	0.42	0.18	0.26	0.27	0.94	0.71
22.....	1.85	2.40	1.36	9.13	9.10	0.65	0.34	0.22	0.28	0.23	0.89	0.70
23.....	2.00	1.55	1.22	10.00	8.99	0.56	0.33	0.26	0.22	0.22	0.86	0.74
24.....	2.40	1.47	2.30	9.80	8.95	0.52	0.36	0.24	0.21	0.27	0.84	0.82
25.....	1.60	1.30	......	9.49	8.92	0.52	0.39	0.26	0.21	0.33	0.85	0.86
26.....	1.50	1.16	13.10	9.34	8.88	0.50	0.34	0.24	0.22	0.32	0.82	0.79
27.....	1.70	1.16	14.60	9.84	8.90	0.80	0.33	0.22	0.20	0.30	0.80	0.74
28.....	1.36	1.12	10.90	13.70	10.05	0.73	0.34	0.22	0.20	0.28	0.76	0.79
29.....	1.27	......	10.80	10.30	9.39	0.61	0.32	0.42	0.20	0.26	0.74	0.75
30.....	1.29	......	10.45	10.10	9.11	0.56	0.30	0.28	0.19	0.29	0.74	0.79
31.....	1.50	......	10.30	......	9.00	......	0.27	0.24	......	0.28	......	0.80

NOTE.— During the period from March 25 to June 20, while the weir was in a damaged condition, all gage heights are referred to a datum 10.00 feet lower than the datum of the regular gage.

Current-meter Discharge Measurements of Little Tonawanda Creek at Linden, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Jan. 18	C. S. De Golyer	5.90	896	2.5	0.2 & 0.8	178	46	601
Jan. 18	C. S. De Golyer	6.28	896	2.5	0.2 & 0.8	193	49	672
Jan. 18	C. S. De Golyer	5.80	896	2.5	0.2 & 0.8	171	45	572
Jan. 19	C. S. De Golyer	2.67	896	2.5	0.2 & 0.8	67.7	36	143
Jan. 19	C. S. De Golyer	2.43	896	2.5	0.2 & 0.8	68.8	36	119
Jan. 20	C. S. De Golyer	2.31	896	2.5	0.2 & 0.8	60.5	35	107
Jan. 20	C. S. De Golyer	2.76	896	2.5	0.2 & 0.8	69.8	36	150
Jan. 20	C. S. De Golyer	2.85	896	2.5	0.2 & 0.8	70.5	36.5	156
Jan. 22 *c*	C. S. De Golyer	1.89	896	2.5	0.2 & 0.8	52.6	33	76.9
Jan. 22	C. S. De Golyer	1.86	896	2.5	0.2 & 0.8	51.8	33	72.4
Jan. 22	C. S. De Golyer	1.90	896	2.5	0.6	52	33	74.4
Mar. 27	C. S. De Golyer	*a* 14.46	896	2.5	0.2 & 0.8	143	42	581
Mar. 27	C. S. De Golyer	*a* 13.24	896	2.5	0.2 & 0.8	110	40.5	377
April 1	C. S. De Golyer	*a* 9.94	896	2.5	0.2 & 0.8	34.9	30.5	41
April 1	C. S. De Golyer	*a* 9.93	896	2.5	0.2 & 0.8	42.8	31	41.5
May 6	C. C. Covert	*a* 9.25	700	1.0	0.2, 0.8 & 0.6	16.9	22.5	14.4
June 18	C. S. De Golyer	*a* 8.74	896	1.0	0.6	5.8	11.5	2.38
June 21 *b*	C. S. De Golyer	0.70	896	0.5	0.6	6.05	14.5	3.73
June 21 *b*	C. S. De Golyer	0.70	896	0.5	0.6	6.18	14.5	3.55
Aug. 14 *b*	G. H. Canfield	0.24	764	0.5	0.6	2.67	7.3	0.55

a Gage height referred to datum 10 feet below that used for weir in its uninjured condition
b Made by wading 300 feet above gage. *c* Gage height variable during this measurement. Give more weight to other measurements of same date.

Mean Daily Discharge, Second-feet, of Little Tonawanda Creek at Linden, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	26.2	18.1	16.0	42	35.0	6.10	2.18	0.87	0.63	0.59	0.82	4.10
2	22.5	22.5	13.2	33	28.0	18.00	1.99	0.68	0.59	0.59	0.77	3.70
3	43.0	20.2	14.4	36	22.0	9.00	1.99	0.68	0.63	0.55	0.82	3.90
4	15.2	20.2	15.2	53	18.0	6.60	1.87	0.96	0.77	0.55	0.87	3.90
5	27.5	17.0	15.2	40	16.0	5.20	3.70	0.77	0.68	0.51	0.77	3.70
6	63.0	15.0	13.2	33	14.0	5.00	2.51	0.82	0.63	0.51	0.77	3.48
7	199.0	13.5	12.8	32	11.0	5.90	2.12	0.87	0.59	0.51	0.77	3.90
8	117.0	12.5	12.8	30	11.0	6.10	1.81	0.68	0.59	0.43	0.77	5.60
9	51.0	11.5	15.6	26	9.7	4.80	1.74	0.68	0.55	0.43	2.51	3.90
10	51.0	10.5	126.0	25	8.5	4.10	1.62	1.45	0.51	0.51	8.40	4.10
11	99.0	10.0	144.0	88	8.0	4.10	1.62	1.07	0.47	0.63	3.90	3.48
12	261.0	9.8	117.0	40	7.5	3.70	1.62	0.77	0.47	0.68	2.79	3.90
13	83.0	9.8	154.0	31	7.0	3.30	1.51	0.72	0.47	0.55	3.07	5.60
14	67.0	9.5	360.0	26	6.6	3.00	1.34	0.68	0.43	0.51	4.10	7.50
15	43.0	9.1	199.0	22	6.1	2.70	1.34	0.63	0.43	0.51	3.90	6.60
16	154.0	11.2	79.0	20	7.0	2.70	1.28	0.59	0.43	0.55	3.21	5.30
17	711.0	9.8	43.0	17	6.6	2.30	1.28	0.59	0.51	0.55	3.07	5.30
18	567.0	9.1	47.0	15	7.5	2.30	1.39	0.55	0.82	0.59	2.93	5.10
19	135.0	9.8	55.0	18	6.1	2.20	1.28	0.51	0.59	0.59	3.60	4.20
20	126.0	51.0	55.0	13	5.2	2.80	2.38	0.43	0.55	1.07	19.10	3.90
21	223.0	75.0	55.0	11	4.8	3.60	1.62	0.43	0.77	0.82	9.70	3.70
22	71.0	117.0	32.0	11	10.0	3.14	1.17	0.59	0.87	0.63	8.10	3.60
23	83.0	47.0	22.5	45	7.3	2.51	1.12	0.77	0.59	0.59	7.20	4.20
24	117.0	40.6	108.0	35	6.4	2.25	1.28	0.68	0.55	0.82	6.60	6.10
25	51.0	27.5	1,070.0	23	5.7	2.25	1.45	0.77	0.55	1.12	6.90	7.20
26	43.0	119.1	357.0	17	4.8	2.12	1.17	0.68	0.59	1.07	6.10	5.30
27	59.0	19.1	606.0	37	5.2	5.60	1.12	0.59	0.51	0.96	5.60	4.20
28	32.0	17.0	104.0	450	48.0	4.10	1.17	0.59	0.51	0.87	4.60	5.30
29	25.6	......	96.0	62	19.0	2.86	1.07	1.62	0.51	0.77	4.20	4.40
30	26.9	......	71.0	50	10.0	2.51	0.96	0.87	0.47	0.91	4.20	5.30
31	43.0	......	62.0	......	7.5	......	0.82	0.68	......	0.87	......	5.60
Mean	117.0	23.7	132.0	46	11.9	4.33	1.60	0.749	0.575	0.672	4.34	4.71

NOTE.— Daily discharge, February 5 to 12, estimated by interpolation and comparison with Genesee river at St. Helena. Daily discharges, March 25 to June 20, while the weir was in its damaged condition, taken from a rating curve well defined by six discharge measurements.

Monthly Discharge of Little Tonawanda Creek at Linden, N. Y.
[Drainage area, 22.0 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	711	15.2	117	5.32	6.13
February	117	9.1	23.7	1.08	1.12
March	1,070	12.8	132.0	6.00	6.92
April	450	11.0	46.0	2.09	2.33
May	48	4.8	11.9	0.541	0.62
June	18	2.0	4.33	0.197	0.22
July	3.7	0.82	1.6	0.073	0.08
August	1.62	0.43	0.749	0.034	0.04
September	0.87	0.43	0.575	0.026	0.03
October	1.12	0.43	0.672	0.031	0.04
November	19.1	0.77	4.34	0.197	0.22
December	7.5	3.48	4.71	0.214	0.25

CATTARAUGUS CREEK.

CATTARAUGUS CREEK AT VERSAILLES, N. Y.

This gaging station is located on a three-span highway bridge in the village of Versailles about 6 miles below Gowanda, 2¼ miles above the mouth of Clear creek and about 8 miles above the mouth of the stream. The drainage area at this point is 467 square miles.

The gage is of the chain-and-weight type, fastened to the upstream side of the bridge and is read twice daily. The channel is composed of rock and gravel. It shifted somewhat during the flood of March, 1913.

Current-meter discharge measurements are made from the downstream side of the bridge. The relation between gage height and discharge is affected by ice conditions.

The maximum flood of March, 1913, was approximately 30,000 second-feet, or 64 second-feet per square mile of drainage area.

This station is maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Mean Daily Gage Height, in Feet, of Cattaraugus Creek at Versailles, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	6.15	5.80	5.80	6.20	5.95	5.45	5.02	4.90	4.75	4.85	5.20	5.12
2.....	5.90	5.60	5.57	6.00	5.75	5.62	4.98	4.93	4.77	4.90	5.22	5.12
3.....	6.55	5.63	5.40	5.95	5.62	5.42	4.98	4.87	4.77	5.08	5.22	5.12
4.....	6.25	5.70	5.53	6.10	5.58	5.30	5.08	4.85	4.75	5.00	5.25	5.12
5.....	6.00	5.50	5.57	5.98	5.52	5.25	5.20	4.87	4.70	4.95	5.20	5.12
6.....	7.25	5.47	6.60	5.82	5.42	5.20	5.18	4.85	4.65	4.95	5.12	5.12
7.....	8.20	5.53	7.30	5.82	5.42	6.60	5.02	4.85	4.65	4.82	5.05	5.12
8.....	8.50	5.73	7.25	5.72	5.38	5.78	5.12	4.85	4.67	4.85	5.00	5.20
9.....	6.85	5.67	7.60	5.78	5.32	5.52	4.98	4.90	4.73	4.85	5.35	5.12
10.....	6.45	5.67	8.40	5.72	5.30	5.35	5.10	5.03	4.67	4.82	6.30	5.15
11.....	6.40	5.77	7.25	6.40	5.30	5.30	5.05	4.93	4.67	4.85	5.65	5.12
12.....	8.50	......	6.85	6.05	5.30	5.20	5.00	4.93	4.67	5.00	5.52	5.08
13.....	6.75	......	7.05	5.80	5.28	5.15	5.00	4.93	4.67	5.05	6.10	5.18
14.....	6.35	......	7.50	5.68	5.22	5.10	5.00	4.87	4.75	4.95	6.10	5.25
15.....	6.25	......	7.15	5.58	5.22	5.12	5.00	4.77	4.67	4.95	5.78	5.25
16.....	6.85	......	6.65	5.52	5.30	5.12	4.95	4.77	4.70	4.90	5.50	5.28
17.....	9.00	......	6.15	5.52	5.32	5.10	4.95	4.75	4.70	4.85	5.40	5.22
18.....	9.80	......	5.97	5.52	5.38	5.08	4.95	4.75	4.78	4.90	5.35	5.18
19.....	7.45	......	6.15	5.53	5.30	5.08	4.90	4.73	4.75	4.95	5.38	5.18
20.....	7.10	8.60	5.97	6.03	5.22	5.10	4.95	4.67	4.75	5.15	6.10	5.18
21.....	8.00	6.75	5.87	5.42	5.22	5.32	4.95	4.65	4.72	5.25	6.10	5.18
22.....	8.00	7.25	5.83	5.52	5.78	5.18	4.90	4.83	4.75	5.35	5.50	5.18
23.....	7.70	6.35	5.97	6.40	5.50	5.10	4.90	4.97	4.80	5.42	5.32	5.28
24.....	7.15	6.05	6.55	6.20	5.42	5.08	5.00	4.95	4.80	5.52	5.25	5.52
25.....	6.65	5.73	11.40	5.70	5.32	5.18	4.92	4.95	4.75	5.60	5.20	5.48
26.....	6.40	5.37	8.20	5.52	5.30	5.68	4.87	4.93	4.80	5.48	5.18	5.35
27.....	6.35	5.83	9.40	9.00	5.40	5.32	4.87	4.87	4.80	5.32	5.18	5.25
28.....	6.25	5.97	8.30	8.40	7.40	5.10	4.97	4.90	4.85	5.20	5.20	5.18
29.....	6.25	......	7.10	7.30	6.15	5.08	4.90	4.90	4.75	5.18	5.15	5.25
30.....	6.15	......	6.35	6.30	5.65	5.10	4.87	4.85	4.75	5.20	5.12	5.18
31.....	6.00	......	6.25	......	5.48	......	4.87	4.83	......	5.18	......	5.18

NOTE.— Relation of gage height to discharge affected by ice conditions from February 3 to March 10.

Current-meter Discharge Measurements of Cattaraugus Creek at Versailles, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Mar. 30 *b*	C. S. De Golyer.............	6.35	896	10	0.2 & 0.8	626	301	1,870
Mar. 31 *a*	C. S. De Golyer.............	6.22	896	10	0.2 & 0.8	562	300	1,510
April 29 *b*	C. S. De Golyer.............	7.06	896	10	0.2 & 0.8	837	302	3,580
April 30 *a*	C. S. De Golyer.............	6.37	896	10	0.2 & 0.8	604	301	1,850
Aug. 14	G. H. Canfield...:..........	4.87	764	5	0.2 & 0.8	179	147	122
Oct. 31	R. S. Barnes................	5.19	897	5	0.2 & 0.8	245	174	287

a Downstream side of bridge. *b* Upstream side of bridge.

Mean Daily Discharge, Second-feet, of Cattaraugus Creek at Versailles, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1.....	1,230	794	......	1,510	1,120	508	191	135	85	118	300	248
2.....	907	586	......	1,180	838	683	171	148	91	135	315	248
3.....	1,920	......	......	1,120	683	479	171	124	91	224	315	248
4.....	1,380	......	......	1,340	639	375	224	118	85	180	338	248
5.....	1,030	......	......	1,150	576	338	300	124	70	158	300	248
6.....	3,630	......	......	927	479	300	287	118	55	158	248	248
7.....	6,820	......	......	927	479	2,330	191	118	55	107	208	248
8.....	7,900	......	......	800	443	875	248	118	61	118	180	300
9.....	2,570	......	......	875	392	576	171	135	79	118	418	248
10.....	1,720	......	......	800	375	418	235	196	61	107	1,700	268
11.....	1,630	......	3,630	1,900	375	375	208	148	61	118	718	248
12.....	7,900	......	2,570	1,260	375	300	180	148	61	180	576	224
13.....	2,340	......	3,070	900	360	268	180	148	61	208	1,340	287
14.....	1,540	......	4,400	752	315	235	180	124	85	158	1,340	338
15.....	1,380	......	3,340	639	315	248	180	91	61	158	875	338
16.....	2,570	......	2,120	576	375	248	158	91	70	135	555	360
17.....	9,700	......	1,230	576	392	235	158	85	70	118	460	315
18.....	12,500	......	993	576	443	224	158	85	94	135	418	287
19.....	4,240	......	1,230	639	375	224	135	79	85	158	443	287
20.....	3,200	......	993	1,180	315	235	158	61	85	268	1,340	287
21.....	6,100	......	873	479	315	392	158	55	76	338	1,340	287
22.....	6,100	......	828	576	875	287	135	110	85	418	555	287
23.....	5,060	......	993	1,900	555	235	135	164	100	479	392	360
24.....	3,340	......	1,920	1,510	479	224	180	158	100	576	338	576
25.....	2,120	......	18,300	775	392	287	144	158	85	660	300	536
26.....	1,630	......	7,640	576	375	752	124	148	100	536	287	418
27.....	1,540	......	11,100	10,800	469	392	124	124	100	392	287	338
28.....	1,380	......	8,040	8,840	4,630	235	164	135	118	300	300	287
29.....	1,380	......	3,670	4,300	1,420	224	135	135	85	287	268	338
30.....	1,230	......	1,800	1,700	718	235	124	118	85	300	248	287
31.....	1,030	......	1,600	......	536	......	124	110	......	287	......	287
Mean...	3,450	750	3,060	1,700	659	425	175	123	80	246	557	307

NOTE.— Channel shifted by floods so that a new rating table is used, beginning March 26, 1913·

Monthly Discharge of Cattaraugus Creek at Versailles, N. Y.
[Drainage area, 467 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January..........................	12,500	907	3,450	7.39	8.52
February..........................	....	....	750	1.61	1.68
March..........................	18,300	....	3,060	6.55	7.55
April..........................	10,800	479	1,700	3.64	4.06
May..........................	4,630	315	659	1.41	1.63
June..........................	2,330	224	425	0.91	1.02
July..........................	300	124	175	0.375	0.43
August..........................	196	55	123	0.263	0.30
September..........................	118	55	80	0.17	0.19
October..........................	660	107	246	0.53	0.61
November..........................	1,700	180	557	1.19	1.33
December..........................	576	224	307	0.66	0.76

NOTE.— Discharge, February 3 to March 10, inclusive, estimated by comparison with records on the Genesee river, Alleghany river and Little Tonawanda creek.

HUDSON RIVER DRAINAGE BASIN.

DESCRIPTION OF BASIN.

The principal sources of Hudson river lies in the wildest portion of the Adirondack mountains, in Essex county, northeastern New York. A number of branches, any one of which might possibly be considered the main stream, form its upper waters; but if the highest collected and permanent body of water be assumed as the true head, then the source of the Hudson becomes Lake Tear-of-the-Clouds, which lies at an elevation of 4,322 feet above tide, in the center of the triangle formed by Mounts Marcy and Skylight and Gray Peak.

The river flows rather irregularly southward until it reaches the northern boundary of Saratoga county, when it makes a sharp turn and flows eastward for about 12 miles by general course, passing through the mountains and forming, as it cuts across the rocky strata, several notable waterfalls. At Sandy Hill, just below Glens Falls, it makes another abrupt turn and flows southward, continuing in this direction until it empties into New York bay.

From Lake Tear-of-the-Clouds to the mouth of the river the distance by water is probably about 300 miles. The total area drained is 13,366 square miles. The river is tidal to Troy, which is also the head of navigation.

The tributaries of the Hudson are numerous, and many of them are large and important. Indian river, Schroon river, and Sacandaga unite with the main stream above Glens Falls, and between the latter point and Troy, Hudson river receives Batten Kill, Fish creek, Hoosic river and the Mohawk. The tributaries below Troy include Catskill, Esopus and Rondout creeks and Wallkill river from the west, and Kinderhook creek, Jansen kill, Wappinger creek, Fishkill creek and Croton river from the east.

LOWER HUDSON RIVER DRAINAGE BASIN.

DESCRIPTION.

Below Troy the bed of the Hudson river is depressed below tidewater level. The stage of the stream is controlled by tidal action, by the inflow of the main stream and by the lateral drainage jointly. The drainage tributary to this portion of the stream includes the south and east slopes of the Catskill mountain region on the west bank and a series of streams heading near the New York-Massachusetts and the New York-Connecticut lines on the east. These streams include the principal present and proposed sources of municipal water-supply of New York city.

RONDOUT CREEK DRAINAGE BASIN.

DESCRIPTION.

Rondout creek has its source in the heart of the timber-covered mountain group forming Wittemberg chain. It flows southeasterly to Napanoch, where it encounters the foot of Shawangunk range, turns abruptly to the northeast and enters the Hudson river at Rondout. Its watershed on the south is very restricted, as it is separated from the Wallkill river only by the narrow Shawangunk ridge. Notable waterfalls occur at Honk Falls and Napanoch over Hudson river shale, and on Good Beer kill above Ellenville. On Good Beer kill there is a total fall of 870 feet from the Cape, three miles above Ellenville, to Ellenville. Of this about 200 feet are concentrated in a series of cascades, called Hanging Rock Falls.

Water power was originally developed at Napanoch in 1754. At present there are five dams in this village, utilizing a total of 115 feet fall. A series of cascades, involving a descent of about 50 feet, occurs at High Falls, where the water flows over Rosendale cement rock.

RONDOUT CREEK AT ROSENDALE, N. Y.

The Rosendale gaging station is located on the highway bridge and was established by Robert E. Horton for the United States Geological Survey in coöperation with the New York City Water Supply Departments on July 6, 1901; it was assumed by the Board of Water Supply of the city of New York on June 1, 1907, at which time a new standard Board of Water Supply chain gage was put in to replace the old one.

Measurements are taken from the bridge at high and medium stages and by wading at a point about 1,000 feet below the bridge at low stages.

The gage is located on the downstream side of the bridge in the middle panel.

The water is confined to one channel under the single-span steel bridge which is 135.7 feet between abutments, at all stages.

A portion of the water of the creek is diverted by a dam below High Falls and sent through the Delaware and Hudson canal, and is discharged into the creek below the gaging station. At Creek Locks, which is about 1½ miles below Rosendale, there is an overflow weir, from which the approximate discharge of the canal may be obtained. The weir, which has a crest of 3.8 feet, is located at the left end of the lock and is equipped with a standard Board of Water Supply staff gage.

The records here published have been furnished by J. Waldo Smith, Chief Engineer, Board of Water Supply of the city of New York.

Mean Daily Discharge, Second-feet, of Rondout Creek, including D. & H. Canal, at Rosendale, N. Y

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1,560	1,002	1,560	1,904	1,579	728	155	65	71	470	690	770
2.....	1,200	922	978	1,390	1,140	599	149	233	87	2,152	610	650
3.....	2,180	850	874	1,230	905	533	138	93	125	998	554	570
4.....	2,670	770	770	1,200	826	493	131	78	146	717	530	586
5.....	1,630	714	610	1,370	762	379	123	146	147	556	474	530
6.....	1,390	578	634	1,090	706	351	107	80	214	371	426	490
7.....	1,350	898	410	986	619	352	101	579	156	488	426	530
8.....	7,634	1,090	546	938	570	437	125	298	109	301	394	1,744
9.....	5,300	746	474	730	521	359	112	181	109	314	9,470	1,155
10.....	2,240	730	530	722	474	334	94	130	113	293	9,164	961
11.....	2,108	610	730	986	440	311	85	82	97	270	3,380	885
12.....	2,168	657	802	3,908	377	292	80	74	68	721	2,216	722
13.....	1,904	621	666	2,300	351	261	81	106	63	631	1,670	650
14.....	1,230	441	6,500	2,180	369	238	111	100	72	510	1,330	634
15.....	1,130	549	3,684	1,510	381	266	94	113	59	359	1,100	610
16.....	1,230	441	2,908	1,220	365	255	98	94	75	310	986	570
17.....	1,530	405	1,880	1,090	333	251	91	82	92	456	1,042	530
18.....	1,400	279	1,380	898	301	235	70	66	94	424	1,170	490
19.....	1,290	306	1,130	826	291	193	85	102	119	465	1,200	450
20.....	1,070	306	2,024	707	276	203	79	114	96	1,793	930	410
21.....	1,230	441	2,670	619	264	340	73	84	94	1,630	810	352
22.....	1,150	441	2,336	651	318	249	69	99	882	1,130	746	340
23.....	970	1,660	1,630	590	631	203	72	85	687	794	714	370
24.....	1,220	1,071	1,690	589	1,522	177	138	61	402	730	714	586
25.....	1,130	643	1,450	590	1,031	166	99	51	244	3,160	666	666
26.....	1,010	571	2,168	505	646	166	93	67	202	3,332	634	826
27.....	938	585	9,812	469	778	166	81	84	164	2,480	514	682
28.....	850	1,600	8,606	2,465	890	165	85	69	162	1,760	522	666
29.....	698	......	3,684	3,868	1,316	160	217	92	161	1,230	890	746
30.....	714	......	2,408	2,468	1,227	155	127	205	181	954	930	730
31.....	690	......	1,430	......	936	......	86	165	......	826	......	730
Mean...	1,704	712	2,160	1,333	682	301	105	125	176	988	1,497	666

Monthly Discharge of Rondout Creek, including D. & H. Canal, at Rosendale, N. Y.
[Drainage area, 386 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	7,634	690	1,704	4.41	5.083
February	1,660	279	712	1.84	1.916
March	9,812	410	2,160	5.60	6.449
April	3,908	469	1,333	3.45	3.851
May	1,579	264	682	1.77	2.039
June	728	155	301	0.78	0.872
July	217	69	105	0.27	0.313
August	579	51	125	0.32	0.375
September	882	59	176	0.46	0.507
October	3,332	270	988	2.56	2.949
November	9,470	394	1,497	3.88	4.324
December	1,744	340	666	1.73	1.988

RONDOUT CREEK AT LACKAWACK, N. Y.

Rondout creek above its junction with Sandberg creek (called also Lackawack creek) at Napanoch is essentially a mountain stream. At Honk falls a natural declivity affords a fall of 125 feet over tilted strata of Hudson river shale. This fall has been increased to 147.5 feet by the construction of a masonry dam at the head of the gorge.

On May 1, 1910, an automatic gage was established at Lackawack, which is situated a short distance above Honk falls, at which place a record was previously maintained. The records of flow at this gaging station have been furnished for publication by Mr. J. Waldo Smith, Chief Engineer of the Board of Water Supply of the city of New York.

Mean Daily Discharge, Second-feet, of Rondout Creek at Lackawack, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	846	253	309	550	362	206	47	41	59	111	231	231
2.....	288	182	239	418	812	160	41	74	47	422	218	216
3.....	792	190	180	410	276	164	49	50	42	248	197	206
4.....	702	202	199	378	256	160	45	38	41	180	184	202
5.....	470	176	190	434	236	148	41	34	78	152	172	192
6.....	418	164	184	366	218	130	40	60	79	134	164	182
7.....	510	164	145	318	204	139	53	346	57	127	158	422
8.....	2,768	184	145	279	184	148	44	113	65	127	162	530
9.....	1,076	186	166	256	166	130	40	76	52	134	4,656	354
10.....	654	170	166	242	158	125	41	65	44	125	2,800	303
11.....	673	184	223	540	156	118	38	54	38	118	929	279
12.....	732	223	199	866	156	110	36	45	36	188	595	250
13.....	482	204	176	620	148	105	54	40	40	162	470	242
14.....	378	228	1,236	550	141	98	47	36	41	134	422	236
15.....	824	253	957	446	136	87	38	84	41	125	354	214
16.....	309	211	744	390	138	89	34	32	34	123	315	204
17.....	550	176	470	327	129	81	33	36	35	118	306	197
18.....	502	176	362	294	127	78	32	90	40	114	288	186
19.....	474	188	318	276	123	76	33	60	40	125	279	174
20.....	362	182	696	248	113	78	33	45	38	482	318	170
21.....	450	204	768	226	110	113	32	35	45	442	276	168
22.....	346	291	610	216	138	84	31	34	454	291	245	156
23.....	342	297	458	206	348	68	32	76	180	248	226	156
24.....	406	170	494	197	378	68	65	74	132	242	211	204
25.....	338	136	458	188	221	66	59	53	111	908	206	192
26.....	300	130	1,252	180	168	65	42	39	100	786	194	211
27.....	282	160	5,832	172	162	60	34	34	87	555	186	186
28.....	248	550	1,944	1,036	358	65	36	32	74	426	182	188
29.....	216	......	964	726	458	54	60	95	71	342	300	178
30.....	216	......	702	454	282	57	44	98	66	294	276	160
31.....	221	......	648	......	231	......	34	68	......	256	......	154
Mean...	522	208	691	394	209	105	42	65	76	206	517	224

Monthly Discharge of Rondout Creek at Lackawack, N. Y.
[Drainage area, 100 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	2,768	216	522	5.22	6.017
February	550	130	208	2.08	2.167
March	5,832	145	691	6.91	7.974
April	1,036	172	394	3.94	4.395
May	458	110	209	2.09	2.414
June	206	54	105	1.05	1.170
July	65	31	42	0.42	0.477
August	346	32	65	0.65	0.748
September	454	34	76	0.76	0.841
October	908	111	266	2.66	3.060
November	4,656	158	517	5.17	5.774
December	530	154	224	2.24	2.581

ESOPUS CREEK DRAINAGE BASIN.

DESCRIPTION.

Esopus creek has its source in Winnisook lake on the northwestern slope of Slide mountain, the highest peak of the Catskills.

From Big Indian to Olive Bridge the stream flows through a deep valley, flanked on both sides by timber-covered mountains. Numerous sites for dams or storage reservoirs are offered at points where the valley broadens out for a short distance to receive the inflowing waters of tributaries. The most notable are at Big Indian, where Birch creek enters; at the mouth of Bush kill, at Shandaken; at the mouth of Stone Clove creek, at Phœnicia; at Cold Brook, where Little Beaver kill enters, and at Olive Bridge. The stream channel is relatively broad and shallow. The bed is covered with cobbles and small boulders left behind after the erosion of drift deposits which formerly filled the valley. The descent of the stream is rapid, though not precipitous, until Olive Bridge is reached. At this point, the stream flows over a rock ledge in a narrow gorge, forming Bishop's falls. The natural fall is 22 feet and is increased to 28 feet by a timber dam on the crest of the ledge. This dam was originally constructed in 1828. The drainage basin of Esopus creek is mostly shown on the Rosendale, Slide Mountain, Phœnicia and the Kaaterskill quadrangles of the U. S. Geological Survey topographic maps. This stream is of great economical importance, owing to its relatively large yield and its location adjacent to the city of New York, and it has been adopted for the city's water supply. The Ashokan dam and reservoir are now in process of construction by the city. Ashokan dam crosses Esopus creek about one mile downstream from Bishop's falls.

ESOPUS CREEK AT MT. MARION, N. Y.

A gaging station was established at Esopus creek at Mt. Marion on April 4, 1907, by the Board of Water Supply of the city of New York. The bed of the stream at this station is rock and the flow is chiefly confined to a narrow, V-shaped, natural trough during low water. The channel is straight for a considerable distance above and below the bridge. The flow is confined to the main channel at all stages of the stream.

Records here published have been furnished by Mr. J. Waldo Smith, Chief Engineer of the Board of Water Supply.

Mean Daily Discharge, Second-feet, of Esopus Creek at Mt. Marion, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1,887	1,000	1,105	2,700	1,635	1,000	146	80	94	50	1,510	979
2.....	1,510	675	930	1,995	1,350	888	138	80	87	195	1,280	948
3.....	2,103	550	750	1,833	1,175	792	138	80	87	375	1,105	900
4.....	3,982	725	700	1,725	1,021	715	130	80	80	255	965	852
5.....	2,500	585	675	1,680	912	635	122	74	80	206	870	810
6.....	1,995	565	675	1,430	840	575	115	74	80	177	765	765
7.....	1,743	467	615	1,301	765	525	108	247	80	159	600	912
8.....	5,380	435	535	1,189	715	485	108	222	80	138	255	1,707
9.....	4,932	455	550	1,049	635	443	108	182	74	255	1,977	1,486
10.....	3,060	392	600	965	575	403	108	141	68	273	5,700	1,374
11.....	2,460	312	635	1,035	535	375	101	119	63	303	5,790	1,315
12.....	2,200	338	685	2,160	485	355	101	108	58	427	5,028	1,091
13.....	1,770	302	650	1,995	455	325	108	101	58	467	4,600	1,091
14.....	1,470	273	3,125	1,797	455	303	101	94	48	403	4,150	1,091
15.....	1,406	286	4,330	1,550	395	288	101	94	38	375	3,478	1,021
16.....	1,161	410	3,800	1,350	395	265	101	87	25	335	3,086	930
17.....	1,259	320	2,530	1,175	387	247	94	80	20	318	2,530	900
18.....	1,510	246	1,905	1,091	355	229	94	80	20	312	1,995	870
19.....	1,550	211	1,470	1,000	325	222	94	80	20	303	1,815	780
20.....	1,280	259	2,085	912	303	215	87	74	36	715	1,550	725
21.....	1,280	302	3,800	828	288	247	87	74	53	1,210	1,374	700
22.....	1,210	399	3,190	780	303	222	87	74	94	1,035	1,231	675
23.....	1,105	1,210	2,300	735	403	206	87	87	130	965	1,140	625
24.....	1,470	685	2,360	685	1,280	187	94	80	111	828	1,049	828
25.....	1,245	625	2,103	650	1,021	173	94	74	91	2,067	979	840
26.....	1,091	535	5,970	615	675	191	87	74	87	2,700	912	852
27.....	1,021	625	13,200	575	625	182	80	68	87	2,480	852	715
28.....	888	1,119	13,070	1,510	1,210	173	74	63	78	2,604	810	525
29.....	810	......	5,700	3,000	2,480	164	87	78	68	2,380	912	525
30.....	765	......	3,478	2,040	1,653	155	80	101	58	1,950	1,035	500
31.....	780	......	2,880	......	1,245	......	80	94	......	1,680	......	500
Mean...	1,833	511	2,787	1,378	803	373	101	98	68	837	1,978	898

Monthly Discharge of Esopus Creek at Mt. Marion, N. Y.
[Drainage area, 368 square miles.

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	5,380	765	1,833	4.98	5.74
February	1,210	211	511	1.39	1.44
March	13,200	535	2,787	7.57	8.74
April	3,000	575	1,378	3.74	4.18
May	2,480	288	803	2.18	2.52
June	1,000	155	373	1.01	1.13
July	146	74	101	0.27	0.32
August	247	63	98	0.27	0.304
September	130	20	68	0.18	0.209
October	2,700	50	837	2.27	2.63
November	5,790	255	1,978	5.38	6.0
December	1,707	500	898	2.44	2.81

ESOPUS CREEK AT WEIR NEAR OLIVE BRIDGE, N. Y.

The weir is constructed of concrete, having a cross-section similar to that experimented on in hydraulic laboratory at Cornell University by the United States Geological Survey, in Series 30, described in Water Supply and Irrigation Paper No. 200.[a]

The average height of this weir above the rock on which it is founded for its entire length is 7.54 feet; length between abutments, 193.90 feet. In order to form a channel of approach, the abutments have been extended upstream at right angles with the axis of the weir for a distance of 16 feet and the area of the channel of approach below the crest of the weir is 1,462 square feet. The abutments extend 14 feet above the level of the crest and it is estimated that a flow of 40,000 cubic feet per second can be taken care of.

Measurements of the head on the weir are made in a well 24 inches in diameter, situated 53 feet upstream from the crest of the weir. Water is admitted to this well through a 3/4-inch pipe extending 16 feet out into the stream, in which, spaced 6 inches apart, are 1/8-inch holes bored vertically through the pipe. The center of this pipe is placed 18 inches above the bed of the stream. A continuous record of the head at this point is kept by means of a Friez automatic water-stage register, geared 1 to 1 and running twenty-four hours. Observations of the flow were first begun on October 17, 1906, though the automatic gage register was not installed until December 5. Prior to this latter date heads were read three times daily and reduced in the usual manner.

Computations of the discharge over this weir are made from a formula which has been deduced from the results of the experiments made by the United States Geological Survey and referred to above. During the winter the ice which forms between the wing walls that form the channel of approach is kept away so that there may be no change in the conditions of flow due to this cause. The watershed of Esopus creek above the weir is 239 square miles, as measured on the topographic maps of the United States Geological Survey.

The records here published have been furnished by J. Waldo Smith, Chief Engineer, Board of Water Supply of New York city.

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[a] "Weir Experiments, Coefficients and Formulas," by Robert E. Horton.

Mean Daily Discharge, Second-feet, of Esopus Creek at Weir near Olive Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1,000	590	483	1,400	956	600	84	33	33	103	759	510
2.....	874	428	410	1,081	816	532	78	40	33	543	563	453
3.....	1,825	420	350	967	712	475	72	29	29	583	520	421
4.....	2,230	428	382	874	640	512	67	26	26	354	484	391
5.....	1,495	353	382	922	580	428	57	29	33	283	562	521
6.....	1,204	353	400	798	525	366	57	36	29	219	214	558
7.....	1,141	287	256	712	467	340	44	139	29	226	162	759
8.....	3,460	271	278	630	410	319	40	89	29	237	202	1,432
9.....	2,700	265	350	580	375	286	36	62	26	300	6,562	1,012
10.....	1,900	194	326	532	333	264	36	62	23	340	12,210	904
11.....	1,551	182	358	712	312	242	33	57	20	340	3,571	820
12.....	1,414	169	358	1,011	294	222	36	48	23	363	2,851	621
13.....	1,093	144	312	922	271	215	53	44	22	461	1,277	641
14.....	910	162	1,970	922	264	194	40	40	26	367	1,764	539
15.....	808	182	1,855	808	264	175	36	36	19	367	905	569
16.....	743	188	1,593	743	271	162	33	36	23	367	1,046	459
17.....	886	175	1,153	680	264	144	33	36	22	344	949	372
18.....	934	139	910	620	242	144	36	67	23	344	702	411
19.....	922	144	830	590	235	133	33	40	21	344	814	355
20.....	816	175	1,523	525	215	139	29	33	29	838	556	362
21.....	945	201	1,722	483	201	144	33	29	36	2,120	568	315
22.....	830	312	1,495	456	194	127	29	26	798	1,367	615	293
23.....	808	502	1,141	420	301	116	29	36	560	1,069	521	301
24.....	898	256	1,269	392	600	105	36	33	251	858	636	390
25.....	798	208	1,141	382	392	105	33	29	173	1,163	527	340
26.....	725	175	3,710	358	340	94	26	29	120	1,392	536	400
27.....	693	242	9,580	340	340	89	23	29	144	1,750	456	291
28.....	620	600	5,300	1,347	785	84	29	26	96	1,438	422	270
29.....	542	......	2,720	1,664	1,141	89	44	44	60	1,655	483	248
30.....	525	......	1,870	1,165	862	78	36	53	84	812	591	240
31.....	502	......	1,621	......	712	......	29	40	......	785	......	250
Mean...	1,155	277	1,485	768	462	231	41	44	95	701	1,401	498

Monthly Discharge of Esopus Creek at Weir near Olive Bridge, N. Y.
[Drainage area, 239 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January..........................	3,460	502	1,155	4.83	5.569
February..........................	600	139	277	1.16	1.202
March..........................	9,580	256	1,485	6.21	7.161
April..........................	1,664	340	768	3.21	3.583
May..........................	1,141	194	462	1.93	2.229
June..........................	600	78	231	0.97	1.077
July..........................	84	23	41	0.17	0.203
August..........................	139	26	44	0.18	0.215
September..........................	798	19	95	0.40	0.445
October..........................	2,120	103	701	2.93	3.383
November..........................	12,210	162	1,401	5.86	6.538
December..........................	1,432	240	498	2.08	2.405

NOTE.— Flow from September 10 to December 31 based on capacity curve and other sources.

KINDERHOOK CREEK.

KINDERHOOK CREEK AT ROSSMAN, N. Y.

This gaging station is located on the highway bridge at Rossman, 3¼ miles above the confluence of the creek, through Stockport creek, with the Hudson river, one mile above the mouth of Claverack creek, which joins Kinderhook creek to form Stockport creek about nine miles above the city of Hudson. The drainage area at this station is 331 square miles.

The gage is of the tape-and-weight type, attached to the highway bridge and is read twice daily. The channel is composed principally of rock.

Current-meter discharge measurements are made from the highway bridge. The low-water flow of the stream is largely controlled by several power plants and paper mills located above the gaging station. Several small lakes also have a tendency to affect the low-water flow. The winter flow is considerably affected by ice. The flood of March, 1913, reached a maximum at this place of 8,780 second-feet, or 26.5 second-feet per square mile.

A portable automatic gage was set up near the permanent gage and a continuous automatic record of gage heights was obtained from August 3 to 12 and from November 30 to December 5, 1912; also from May 31 to June 10, 1913. The true mean daily discharge was determined from hourly gage heights as given by the continuous record and was compared with the discharge from the semidaily observations of the permanent gage.

It appears that daily discharge computed from semidaily observations was fairly good for discharge above 100 second-feet. The mean daily gage heights obtained from semidaily observations are here being published, together with estimates for the periods when the daily discharge is above 100 second-feet.

This station is maintained by the United States Geological Survey in coöperation with the Department of the State Engineer and Surveyor.

Mean Daily Gage Height, in Feet, of Kinderhook Creek at Rossman, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	28.35	28.00	28.30	29.60	27.16	27.29	26.14	26.58	26.10	26.14	27.02	27.30
2.....	28.35	27.60	28.05	28.90	27.06	27.20	26.52	26.08	25.98	26.32	26.92	27.32
3.....	28.60	27.65	27.70	28.45	26.94	27.12	26.49	26.28	25.93	26.26	26.82	27.23
4.....	29.10	27.50	27.55	28.25	26.84	27.04	26.20	26.18	26.13	26.02	26.70	27.27
5.....	28.60	27.50	27.50	28.40	26.90	26.92	26.36	26.19	26.47	26.10	26.70	27.26
6.....	28.80	27.60	27.45	28.35	27.02	26.84	26.20	26.40	26.43	26.52	26.85	27.25
7.....	28.50	27.48	27.32	28.20	27.01	26.73	26.06	26.12	26.20	26.20	26.62	27.08
8.....	28.90	27.50	27.24	28.00	27.06	26.65	26.60	26.26	26.18	26.48	26.71	27.32
9.....	28.80	......	27.42	27.90	26.94	26.84	26.31	26.04	26.26	26.10	26.48	27.27
10.....	28.70	......	27.80	27.75	26.84	26.64	26.34	26.18	26.24	26.23	26.94	27.26
11.....	28.60	......	28.00	28.00	26.89	26.70	26.22	26.14	26.12	26.01	27.48	27.23
12.....	28.60	......	28.05	28.80	26.77	26.68	26.21	26.48	26.00	26.32	27.38	27.06
13.....	28.90	......	27.95	28.90	26.72	26.58	26.18	26.34	26.12	26.08	27.20	27.20
14.....	28.80	......	28.50	28.90	26.73	26.56	26.12	26.48	26.01	26.25	27.11	27.31
15.....	28.70	......	29.50	28.50	26.57	26.55	26.12	26.64	26.25	26.44	27.38	27.49
16.....	28.70	......	29.30	28.30	26.72	26.50	26.28	26.58	26.19	26.80	27.15	27.55
17.....	28.70	......	28.80	28.15	26.70	26.65	26.14	26.21	26.12	26.58	27.16	27.28
18.....	28.60	......	28.30	27.95	26.81	26.58	26.12	26.21	26.18	26.44	27.28	27.26
19.....	28.60	......	28.25	27.80	26.44	26.53	26.23	26.22	26.20	26.10	27.18	27.18
20.....	28.30	......	28.15	27.70	26.92	26.62	26.18	26.27	26.06	26.51	27.28	27.05
21.....	28.70	......	28.70	27.65	26.75	26.53	26.24	26.43	26.02	26.54	27.55	27.20
22.....	28.45	......	28.90	27.55	26.63	26.53	26.16	26.18	26.20	26.62	27.36	27.21
23.....	28.20	......	28.40	27.49	26.95	26.74	26.20	26.04	26.40	26.68	27.25	27.05
24.....	28.15	......	28.35	27.42	27.70	26.65	26.31	26.24	26.62	26.52	27.27	27.19
25.....	28.10	......	28.30	27.40	27.60	26.64	26.59	25.97	26.50	26.66	27.29	27.22
26.....	27.90	......	29.70	27.27	27.40	26.61	26.45	26.10	26.47	26.82	27.27	27.22
27.....	27.80	......	30.80	27.38	27.32	26.54	26.22	26.12	26.46	28.00	27.22	27.31
28.....	27.70	29.10	32.70	27.22	27.12	26.51	26.12	26.17	26.03	27.65	27.28	27.30
29.....	27.60	......	30.50	27.28	27.60	26.35	26.28	26.19	26.55	27.47	27.23	27.08
30.....	27.60	......	29.60	27.24	27.65	26.48	26.08	26.28	26.24	27.32	27.30	27.05
31.....	27.50	......	29.40	......	27.48	......	26.26	26.12	......	27.22	......	27.02

NOTE.— Observations suspended, February 9 to 27, inclusive, on account of ice.

Mean Daily Discharge, Second-feet, of Kinderhook Creek at Rossman, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1,120	826	1,070	2,460	292	354	......	......	......	......	233	359
2.....	1,120	534	866	1,640	249	310	......	......	......	......	195	370
3.....	1,340	568	602	1,210	202	274	......	......	......	......	160	325
4.....	1,860	470	502	1,030	167	241	......	......	......	......	122	344
5.....	1,340	470	470	1,160	187	195	......	......	......	......	122	339
6.....	1,540	534	441	1,120	233	167	......	......	......	......	170	334
7.....	1,250	458	370	988	229	131	......	......	......	......	100	257
8.....	1,640	470	339	826	249	108	......	......	......	......	125	370
9.....	1,540	......	424	748	202	167	......	......	......	......	......	344
10.....	1,440	......	673	638	167	105	......	......	......	......	292	339
11.....	1,340	......	826	826	184	122	......	......	......	......	458	325
12.....	1,340	......	866	1,540	144	116	......	......	......	......	401	249
13.....	1,640	......	787	1,640	128	......	......	......	......	......	310	310
14.....	1,540	......	1,250	1,640	131	......	......	......	......	......	270	364
15.....	1,440	......	2,340	1,250	......	......	......	......	......	......	401	464
16.....	1,440	......	2,090	1,070	128	......	......	......	......	153	288	502
17.....	1,440	......	1,540	947	122	......	......	......	......	......	280	349
18.....	1,340	......	1,070	787	155	......	......	......	......	......	349	339
19.....	1,340	......	1,030	673	......	......	......	......	......	......	301	301
20.....	1,070	......	947	602	195	100	......	......	......	......	349	245
21.....	1,440	......	1,440	568	138	......	......	......	......	......	502	310
22.....	1,210	......	1,640	502	111	......	......	......	......	100	391	315
23.....	988	......	1,160	464	206	134	......	......	......	116	334	245
24.....	947	......	1,120	424	602	108	......	......	......	......	344	306
25.....	906	......	1,070	412	534	105	......	......	......	111	354	320
26.....	748	......	2,590	344	412	......	......	......	......	160	344	320
27.....	673	......	4,200	401	370	......	......	......	......	826	320	364
28.....	602	1,860	7,480	320	274	......	......	......	......	568	349	359
29.....	534	......	3,730	349	534	......	......	......	......	453	325	257
30.....	534	......	2,460	340	568	......	......	......	......	370	359	245
31.....	470	......	2,210	......	458	......	......	......	......	320	......	233
Mean..	1,200	......	1,540	897	249	......	......	......	......	......	284	326

NOTE.— Daily discharge not given where it falls below 100 second-feet.

Monthly Discharge of Kinderhook Creek at Rossman, N. Y.
[Drainage area, 331 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	1,860	470	1,200	3.62	4.17
February	....	....	....	....	....
March	7,480	330	1,540	4.65	5.36
April	2,460	320	897	2.71	3.02
May	602	....	249	0.752	0.87
June	354	....	128	0.387	0.43
July	....	....	....	....	....
August	....	....	....	....	....
September	....	....	....	....	....
October	....	....	....	....	....
November	502	....	284	0.858	0.96
December	502	233	326	0.985	1.14

NOTE.— Estimates for May, June and November, computed from daily discharges taken from the rating curve, whether below 100 second-feet or not.

PRECIPITATION RECORDS.

Monthly Rainfall, in Inches, on Catskill Watersheds.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for year.
						Esopus Creek — Above Olive Bridge Dam.							
1906	2.85	2.26	4.80	3.85	5.01	6.16	4.42	3.76	3.18	5.47	2.26	4.08	48.10
1907	2.59	1.66	1.20	2.17	3.83	3.45	3.13	1.17	11.49	6.78	7.06	5.80	50.33
1908	3.49	6.40	2.93	2.98	9.23	2.29	6.32	2.04	2.46	4.21	0.57	2.58	45.50
1909	4.82	6.97	4.35	5.20	4.48	4.38	2.05	4.83	4.17	1.40	1.98	4.63	49.27
1910	7.61	4.37	0.93	10.18	2.95	4.59	2.02	3.93	5.21	1.02	3.70	2.30	48.81
1911	2.60	1.94	3.90	2.37	1.03	5.94	3.19	4.83	4.25	7.50	3.50	2.91	43.99
1912	2.38	2.96	5.96	5.76	4.36	1.72	3.25	7.47	3.44	4.84	4.08	4.70	50.92
1913	4.26	2.28	7.70	3.81	3.74	1.01	1.90	4.86	4.02	6.76	5.60	2.93	48.87
Mean	3.82	3.60	3.97	4.54	4.33	3.69	3.20	4.11	4.78	4.75	3.59	3.74	48.21
						Rondout Creek — Above Honk Falls and Lackawack.							
1906	2.69	2.64	3.91	4.54	4.34	5.23	5.51	4.47	3.87	4.40	2.15	4.20	47.95
1907	3.43	1.93	1.93	2.19	3.68	3.60	2.95	1.88	9.42	5.59	6.32	5.03	47.95
1908	3.12	6.24	3.53	4.02	7.64	1.75	5.08	2.59	2.64	3.74	0.72	3.09	44.16
1909	4.82	6.61	3.99	4.71	3.36	4.39	2.07	4.46	3.54	1.25	1.86	4.47	45.53
1910	7.07	4.53	1.03	8.30	3.60	4.22	2.34	4.08	5.25	1.18	3.36	2.25	47.21
1911	3.44	1.99	4.42	3.11	1.16	6.57	3.27	5.14	4.17	7.10	3.43	3.08	46.88
1912	2.24	2.41	5.86	5.77	3.59	1.91	2.82	7.32	3.79	3.92	3.02	4.78	47.43
1913	5.05	2.61	7.65	4.67	3.46	1.44	3.38	6.04	4.20	6.53	4.74	2.72	52.49
Mean	3.98	3.62	4.04	4.66	3.85	3.65	3.43	4.50	4.61	4.20	3.20	3.70	47.44

Note for Esopus creek.— Jan., 1906, to Nov., 1906, inclusive, average of six stations. Dec., 1906, average of 7 stations. Jan., 1907, to June, 1907, inclusive, average of 8 stations. July, 1907, and Aug., 1907, average of 11 stations. Sept., 1907, to Dec., 1909, inclusive, average of 12 stations. Jan., 1910, average of 11 stations. Feb., 1910, and Mar., 1910, average of 12 stations. Apr., 1910, to Dec., 1913, inclusive, average of 10 stations.

Note for Rondout creek.— Jan., 1906, to Dec., 1906, inclusive, average of 4 stations. Jan., 1907, to Mar., 1910, inclusive, average of 6 stations. Apr., 1910, to Dec., 1913, inclusive, average of 5 stations.

Monthly Rainfall, in Inches, on Catskill Watersheds—(Concluded).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for year.
						Schoharie Creek — Above Prattsville.							
1907	2.05	1.54	1.04	2.33	3.46	3.27	3.28	0.76	8.29	5.61	6.08	4.66	42.27
1908	2.93	5.51	2.31	2.68	7.53	2.22	4.36	2.32	2.82	4.31	0.44	2.01	39.44
1909	4.12	4.82	3.38	4.47	4.24	4.19	1.53	3.28	3.17	1.35	1.85	4.14	40.49
1910	6.67	3.42	0.62	7.76	3.07	5.08	1.54	2.28	4.22	0.80	4.94	1.45	41.75
1911	1.85	1.13	2.13	1.43	1.43	6.09	2.06	4.16	3.21	4.68	1.99	1.79	31.95
1912	1.66	2.14	4.06	4.88	3.64	1.52	2.60	3.84	3.48	3.31	3.14	2.86	37.13
1913	2.78	2.00	5.24	3.22	3.05	1.58	1.46	3.56	3.16	5.34	5.59	1.94	38.92
Mean	3.15	2.94	2.68	3.82	3.77	3.41	2.40	2.87	4.05	3.61	3.43	2.69	38.82
						Catskill Creek — Above Oak Hill.							
1907	1.92	1.28	1.16	2.38	3.25	3.15	3.31	0.85	6.58	4.18	4.91	3.52	36.49
1908	2.43	4.01	1.83	2.15	5.86	1.58	4.00	3.01	1.59	3.35	0.39	1.57	31.77
1909	3.56	3.76	2.79	3.00	3.92	3.52	2.36	2.47	2.74	0.96	1.50	3.59	34.17
1910	4.67	3.02	0.48	5.70	2.94	4.82	1.21	1.55	4.07	0.91	3.57	0.92	33.86
1911	1.32	1.13	2.07	1.55	1.41	7.06	2.20	3.38	2.94	4.32	1.45	1.87	30.70
1912	1.71	2.12	3.50	4.50	3.36	1.08	2.63	3.80	3.27	3.86	2.78	2.37	34.98
1913	2.66	1.87	4.60	3.05	3.18	2.16	1.83	1.37	2.67	4.89	4.73	1.83	34.84
Mean	2.61	2.46	2.35	3.19	3.42	3.34	2.51	3.35	3.41	3.21	2.76	2.24	33.85

Note for Schoharie creek.— Jan., 1907, to June, 1907, inclusive, average of 6 stations. July, 1907, to Dec., 1907, inclusive, average of 7 stations. Jan., 1908, to Mar., 1910, inclusive, average of 5 stations. Apr., 1910, to Dec., 1913, inclusive, average of 4 stations.

Note for Catskill creek.— Jan., 1907, to Dec., 1907, inclusive, average of 6 stations. Jan., 1908, to Dec., 1913, inclusive, average of 5 stations.

MOHAWK RIVER DRAINAGE BASIN.

DESCRIPTION.

Mohawk river, the largest of the tributaries of the Hudson river, rises in the sandy hills south of Boonville, in central New York, about 40 miles from the east end of Lake Ontario. Its uppermost tributaries are fed by large springs, and in addition the stream receives considerable water brought in from the adjacent Black river drainage basin for the supply of the Black river and Erie canals.

The Mohawk flows southward until it reaches the city of Rome, at which point it turns to the east, flowing across the state in a course a little south of east until it enters the Hudson at Cohoes, a few miles above Troy. It has a length by actual course of 140 to 145 miles, and a drainage area, measured at the mouth, of about 3,468 square miles, according to U. S. Geological Survey topographic maps.

The immediate valley of the Mohawk is broad and open, at many places a mile or two in width, from which there is a rise, usually gradual but sometimes abrupt, to hills which attain altitudes several hundred feet above the stream. Toward the mouth of the river the valley becomes more contracted and the meadows disappear. The flats which border the stream have a rich alluvial soil; the more elevated lands are covered with gravelly loam and clay.

Above Rome the Mohawk flows through a deep gorge in shale rock; from Rome eastward to Little Falls the valley is deeply filled with alluvial deposits, and the flood plains on either side become submerged during freshets, thus acting to some extent as storage reservoirs. At Little Falls the river cuts through a rocky gorge, whose walls rise precipitously 500 or 600 feet.

Below Rome the fall of the river is small and rather uniform, being made up of long quiet reaches with slight riffles; but at Little Falls this uniformity is broken, and the stream descends in a succession of falls about 45 feet in 2,500. The average fall between Rome and the lower aqueduct at Crescent, a distance of 110.7 miles, is 2.43 feet per mile; thence to the level of slack water above Troy dam there is a farther descent of 149.5 feet in 4.4 miles, but of this 105 feet is included within the improved power at Cohoes.

The principal tributaries of the Mohawk below the source are, successively, Oriskany, West Canada, East Canada and Schoharie creeks.

The Erie canal runs parallel to the Mohawk through most of its course below Rome and derives a part of its water-supply from the river. Feeder dams for purposes of diversions are located on the river at Delta, Rome, Little Falls, Rocky Rift and Rexford Flats. A dam at Oriskany creek also diverts into the canal a portion of the flow of that tributary, as well as waters brought into the Mohawk basin from storage reservoirs located in the upper drainage basin of Chenango river near Hamilton, N. Y. There is also a diversion dam near the mouth of Schoharie creek, the largest tributary of the Mohawk.

Drainage Areas of Mohawk River and Tributaries.
(From U. S. G. S. topographic maps.)

LIMITS.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	Total.
Lansingkill.				
Source to junction with West branch	29.41	....	29.41	....
MOHAWK RIVER.				
Source of West branch to junction with East branch	19.25	19.25	....	....
Source of East branch to junction with West branch	15.16	34.41	....	....
Junction of East and West branches to and including first large creek to north	5.86	40.27	....	....
First creek below junction to and including second large creek to north	6.08	46.35	....	....
Second creek below junction to junction of Lansingkill, Hillside	3.40	49.75	49.75	79.16
Junction at Hillside to mouth of Stringer brook	1.17	....	....	80.33
Stringer Brook.				
Source to mouth	13.43	....	13.43	93.76
MOHAWK RIVER.				
Junction of Stringer brook to mouth of Big brook (Frenchville)	3.02	....	....	96.78
Big Brook.				
Source to mouth	22.86	....	22.86	119.64
MOHAWK RIVER.				
Junction of Big brook (Frenchville) to State feeder dam at Delta	16.25	....	....	135.89
State feeder dam at Delta to highway bridge below new Delta dam	11.97	....	....	147.86
Highway bridge below new Delta dam to Ridge Mills dam	7.74	....	....	155.60
Ridge Mills dam to Floyd Ave. bridge	2.59	....	....	158.19
Floyd Ave. bridge to State dam at Rome	2.55	....	....	160.74
State dam at Rome to mouth of Six-Mile creek	26.40	....	....	187.14
Six-Mile Creek.				
Source to mouth	14.94	....	14.94	202.08
MOHAWK RIVER.				
Mouth of Six-Mile creek to mouth of Nine-Mile creek	5.29	....	....	207.37
Nine-Mile Creek.				
Source to South Trenton	19.62	....	....	....
South Trenton to crossing of 500-foot contour	6.54	26.16	....	....
Crossing of 500-foot contour to first bridge above Holland Patent	2.49	28.65	....	....
First bridge above Holland Patent to first bridge below Holland Patent	12.71	41.36	....	....
First bridge below Holland Patent to Stittville	6.12	47.48	....	....
Stittville to first bridge below Stittville (Powell's bridge)	11.59	59.07	....	....
Powell's bridge to third bridge below Stittville	10.34	69.41	....	....
Third bridge below Stittville to mouth	0.79	70.20	70.20	277.57
MOHAWK RIVER.				
Mouth of Nine-Mile creek to mouth of Oriskany creek	6.19	....	....	283.76
*Areas diverted from Chenango river basin.**				
Chenango river from source to junction with Eaton brook at Eaton	25.25	....	....	25.25
Eaton brook from source to Eaton reservoir dam	9.16	9.16	....	....
Eaton reservoir dam to junction with Chenango river at Eaton	6.69	15.85	15.85	41.10
Chenango river, junction Eaton brook to head of feeder canal	2.99	....	....	44.09

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* Not included in totals for Mohawk river areas.

Drainage Areas of Mohawk River and Tributaries — **(Continued).**
(From U. S. G. S. topographic maps.)

LIMITS.	AREA IN SQUARE MILES.			
	Place to place.	**Sub-total.**	**Branch total.**	**Total.**
Areas diverted from Chenango river basin — (Con.).				
Bradley brook from source to Bradley reservoir dam	3.04	....	....	....
Bradley reservoir dam to head of feeder canal	4.57	7.61	....	....
Kingsley brook from source to Kingsley reservoir dam	5.12	....	....	....
Kingsley reservoir dam to junction with Bradley brook feeder canal	1.75	6.87	14.48	**58.57**
Head of feeder, Chenango river to junction of feeders, Woodman pond	2.04	....	....	**60.61**
Payne brook from source to Madison reservoir dam	8.73	....	....	....
Madison reservoir dam to junction of feeders, Woodman pond	2.04	10.77	10.77	**71.38**
Junction of feeders, Woodman pond to junction with Leland pond outlet	3.26	....	....	**74.64**
Source, Leland creek to canal reservoir dam	6.74	....	....	**81.38**
Junction with Leland pond outlet to natural watershed limits	6.53	....	....	**87.91**
Oriskany Creek.				
Source of Oriskany creek to bridge at Solsville	7.84	....	....	....
Solsville to Oriskany Mills	13.27	21.11	....	....
Oriskany Mills to junction with Big creek (Deansboro)	16.54	37.65	....	....
Source of Big creek to junction with Oriskany creek (Deansboro)	20.32	57.97	....	....
Junction with Big creek to Farmers Mills	14.09	72.06	....	....
Farmers Mills to Clinton	11.11	83.17	....	....
Clinton to Kirkland	4.73	87.90	....	....
Kirkland to dam above Clark Mills	5.76	93.66	....	....
Dam above Clark Mills to Walesville	9.92	103.58	....	....
Walesville to Colemans	36.99	140.57	....	....
Colemans to State dam above Oriskany	5.47	146.04	....	....
State dam above Oriskany to mouth of Oriskany creek	0.78	146.82	146.82	430.58
MOHAWK RIVER.				
Mouth of Oriskany creek to mouth of Sauquoit creek	15.68	....	....	**446.26**
Sauquoit Creek.				
Source of Sauquoit creek to Cassville	7.17	....	....	....
Cassville to dam at Clayville	4.71	11.88	....	....
Dam at Clayville to dam at Sauquoit	12.54	24.42	....	....
Dam at Sauquoit to dam above Chadwick	4.28	28.70	....	....
Dam above Chadwick to 700-foot contour at Willowvale	3.72	32.42	....	....
700-foot contour at Willowvale to dam at Washington Mills	11.37	43.79	....	....
Dam at Washington Mills to dam above New Hartford	2.92	46.71	....	....
Dam above New Hartford to dam at Capron	1.52	48.23	....	....
Dam at Capron to dam below Capron	2.20	50.43	....	....
Dam below Capron to upper dam at New York Mills	0.49	50.92	....	....
Upper dam at New York Mills to mouth of Sauquoit creek	14.58	65.50	65.50	**511.76**
MOHAWK RIVER.				
Mouth of Sauquoit creek to Black River R. R. bridge at Utica	13.09	....	....	**524.85**
Black River R. R. bridge at Utica to mouth of Reels creek	2.70	....	....	**527.55**
Reels Creek.				
Source to mouth	9.69	....	**9.69**	**537.24**
Ballou Creek.				
Source to mouth	4.57	....	**4.57**	**541.81**

Drainage Areas of Mohawk River and Tributaries — (Continued).
(From U. S. G. S. topographic maps.)

LIMITS.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	Total.
MOHAWK RIVER.				
Mouth of Ballou creek to mouth of Starch Factory creek	1.99	....	....	543.80
Starch Factory Creek.				
Source to mouth	7.22	....	....	551.02
MOHAWK RIVER.				
Mouth of Starch Factory creek to mouth of Sterling creek	30.93	....	....	581.95
Sterling Creek.				
Source to mouth	19.94	....	....	601.89
MOHAWK RIVER.				
Mouth of Sterling creek to mouth of Moyer creek	14.85	....	....	616.74
Moyer Creek.				
Source to mouth	21.66	....	....	638.40
MOHAWK RIVER.				
Mouth of Moyer creek to mouth of Steels creek	7.30	....	....	645.70
Steels Creek.				
Source to mouth	29.54	....	....	675.24
MOHAWK RIVER.				
Mouth of Steels creek to Mohawk-Herkimer road bridge	33.07	....	....	708.31
Mohawk-Herkimer road bridge to mouth of West Canada creek	7.51	....	....	715.82
*West Canada Creek.**				
Source to mouth	583.64	....	....	1,299.46
MOHAWK RIVER.				
Mouth of West Canada creek to State dam at Little Falls	26.07	....	....	1,325.53
State dam at Little Falls to Gilberts dam	4.20	....	....	1,329.73
Gilberts dam to Rocky Rift feeder dam	11.82	....	....	1,341.55
Crum Creek.				
Source to mouth	11.40	....	....	1,352.95
MOHAWK RIVER.				
Mouth of Crum creek (feeder dam) to mouth of Nowadaga creek	0.27	....	....	1,353.22
Nowadaga Creek.				
Source to mouth	32.43	....	....	1,385.65
MOHAWK RIVER.				
Mouth of Nowadaga creek to mouth of East Canada creek	4.65	....	....	1,390.30
*East Canada Creek.**				
Source to mouth	281.61	....	....	1,671.91
MOHAWK RIVER.				
Mouth of East Canada creek to mouth of East Crum creek	0.59	....	....	1,672.50
East Crum Creek.				
Source to mouth	15.55	....	....	1,688.05
MOHAWK RIVER.				
Mouth of East Crum creek to mouth of Timmerman creek	3.31	....	....	1,691.36

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* For subareas, see separate table.

Drainage Areas of Mohawk River and Tributaries — (Continued).
(From U. S. G. S. topographic maps.)

LIMITS.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	Total.
Timmerman Creek.				
Source to mouth	16.38	....	....	1,707.74
MOHAWK RIVER.				
Mouth of Timmerman creek to mouth of Zimmerman creek	0.52	....	....	1,708.26
Zimmerman Creek.				
Source to mouth	14.63	....	....	1,722.89
MOHAWK RIVER.				
Mouth of Zimmerman creek to St. Johnsville bridge	0.54	....	....	1,723.43
St. Johnsville bridge to mouth of Garoga creek	12.05	....	....	1,735.48
Garoga Creek.				
Source of Garoga creek to foot of East Garoga lake	10.44	....	....	....
Foot of East Garoga lake to foot of pond, Newkirk Mills	3.18	13.62	....	....
Foot of pond, Newkirk Mills, to junction with Peck lake outlet	9.11	22.73	22.73	....
Source of Woodworth lake to foot of Peck lake	16.29	....	....	....
Foot of Peck lake to junction with Garoga creek	4.52	20.81	43.54	....
Junction with Peck lake outlet to Rockwood	7.20	....	50.74	....
Rockwood to Garoga	2.19	....	52.93	....
Garoga to mouth of Sprite creek	4.99	....	57.92	....
Source of Sprite creek to mouth	14.13	....	72.05	....
Mouth of Sprite creek to fourth highway bridge above mouth	13.19	....	85.24	....
Fourth highway bridge above mouth to second highway bridge above mouth	7.78	....	93.02	....
Second highway bridge above mouth to first highway bridge above mouth	1.17	....	94.19	....
First highway bridge above mouth to mouth of Garoga creek	0.51	....	94.70	1,830.18
MOHAWK RIVER.				
Mouth of Garoga creek to Fort Plain	12.70	....	....	1,842.88
Fort Plain to Canajoharie	67.92	....	....	1,910.80
Canajoharie Creek.				
Source to mouth	69.22	....	69.22	1,980.02
MOHAWK RIVER.				
Canajoharie to Sprakers	9.94	....	....	1,989.96
Flat Creek.				
Source to mouth	49.11	....	49.11	2,039.07
MOHAWK RIVER.				
Sprakers to mouth of Yatesville creek	17.56	....	....	2,056.63
Yatesville Creek.				
Source to mouth	12.71	....	12.71	2,069.34
MOHAWK RIVER.				
Mouth of Yatesville creek to mouth of Cayadutta creek	24.48	....	....	2,093.82
Cayadutta Creek.				
Source of Cayadutta creek to Johnstown (Main street bridge)	35.16	....	....	....
Johnstown (Main street bridge) to dam above Sammonsville	2.84	38.00	....	....
Dam above Sammonsville to dam at Sammonsville	3.53	41.53	....	....
Dam at Sammonsville to dam two miles below Sammonsville	16.44	57.97	....	....
Dam below Sammonsville to mouth of Cayadutta creek	5.06	63.03	63.03	2,156.85

Drainage Areas of Mohawk River and Tributaries — (Concluded).
(From U. S. G. S. topographic maps.)

LIMITS.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	Total.
MOHAWK RIVER.				
Mouth of Cayadutta creek to Fultonville bridge.	0.68			2,157.53
Fultonville bridge to mouth of Schoharie creek...	47.39			2,204.92
*Schoharie Creek.**				
Source to mouth	909.30			3,114.22
MOHAWK RIVER.				
Mouth of Schoharie creek to mouth of Chuctanunda creek (Amsterdam)	31.54			3,145.76
South Chuctanunda Creek.				
Source to Minaville	22.62	22.62		
Minaville to mouth	10.41	33.03	33.03	3,178.79
North Chuctanunda Creek.				
Source to dam, Amsterdam reservoir	8.76	8.76		
Dam, Amsterdam reservoir, to Hagaman	20.77	29.53		
Hagaman to Rockton	4.11	33.64		
Rockton to mouth	5.58	39.22	39.22	3,218.01
MOHAWK RIVER.				
Amsterdam to Hoffman Ferry	43.59			3,261.60
Hoffman Ferry to Scotia bridge	52.44			3,314.04
Scotia bridge to mouth of Alplaus kill	24.37			3,338.41
Alplaus Kill.				
Source to mouth	55.80		55.80	3,394.21
MOHAWK RIVER.				
Mouth of Alplaus kill to Rexford Flats dam	1.23			3,395.44
Rexford Flats dam to Vischer's Ferry dam	10.98			3,406.42
Vischer's Ferry dam to Dunsbach Ferry dam	53.20			3,459.62
Dunsbach Ferry dam to Crescent aqueduct	10.25			3,469.87
Crescent aqueduct to Crescent dam	2.68			3,472.55
Crescent dam to Cohoes Co's dam	0.61			3,473.16
Cohoes Co's dam to mouth of Mohawk river	12.68			3,485.84

* For subareas see separate table.

Table showing Drainage Areas used previous to 1910 *in estimating Run-off of Mohawk River and Tributaries at certain Gaging Stations; together with latest determination of these Areas from U. S. Geological Survey Topographic Maps.*

STREAM.	Gaging station.	DRAINAGE AREAS IN SQUARE MILES.	
		Formerly used.	From U. S. G. S. maps.
Mohawk river	Cohoes dam	3,456	3,473.2
	Dunsbach Ferry	3,440	3,459.6
	Rexford Flats	3,385	3,395.4
	Schenectady, Freemans bridge	3,321	
	Scotia bridge		3,314.0
	Amsterdam		3,218.0
	Tribes Hill		3,114.2
	Fonda-Fultonville		2,157.5
	Fort Plain		1,842.9
	Rocky Rift dam	1,351	1,341.6
	Little Falls	1,306	1,329.7
	Herkimer		708.3
	Utica, Black River R. R. bridge	500	524.8
	Rome, State dam	148 (1906)	160.0
	Floyd Ave. bridge		158.2
	Ridge Mills	152.5 (U. S. D. W.)	155.6

Table showing Drainage Areas used previous to 1910 in estimating Run-off of Mohawk River and Tributaries at certain Gaging Stations; together with latest determination of these Areas from U. S. Geological Survey Topographic Maps — (Concluded).

STREAM.	Gaging station.	DRAINAGE AREAS IN SQUARE MILES.	
		Formerly used.	From U. S. G. S. maps.
Schoharie creek.......	Fort Hunter....................	947	909.3
	Schoharie Falls..................	930	....
	Middleburg.....................	....	527.4
	Prattsville.......................	243	238.4
Cayadutta creek......	Near Johnstown................	40	41.5
Garoga creek.........	Near Fort Plain.................	80.8	....
East Canada creek....	Dolgeville.......................	256	....
West Canada creek...	Kast Bridge.....................	574 (1908)	574.8
	Poland..........................	....	470.1
	Middleville......................	519 (U. S. D. W.)	527.3
	Trenton Falls...................	375	375.8
	Twin Rock bridge..............	364	364.4
Sauquoit creek.......	New York Mills..................	51.5	50.9
Oriskany creek.......	State feeder dam................	144	146.0
Nine-Mile creek......	Stittville, Powell's bridge.........	62.6	59.1

MOHAWK RIVER WATER-SURFACE ELEVATION RECORDS.

The following tables give records of the mean daily elevation of water-surface of the Mohawk river at different gaging stations for 1913. The elevations are referred to Barge canal datum, which is equivalent to mean tide in New York, taken as elevation 14.73 below the old grist mill bench-mark at Greenbush (Rensselaer).

The tables of elevations of water-surface are arranged in order proceeding upstream from the junction of the Mohawk river with the Hudson river at Waterford, to Delta.

An accompanying table gives details as to the types of gages used, the datum of each and the manner in which they are read.

Water-surface Elevation Gages Maintained on Mohawk River and Tributaries During the Year 1913.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to —
Mowhawk river:						
Waterford	Jan. 15, 1907	Barge canal employee.	0.09	Staff	0.1 foot.	0.1 foot.
Cohoes	Dec. —, 1903	Jas. Murphy	153.47	“	0.1 “	0.1 “
Dunsbach Ferry, Emerick	Mar. 12, 1898	Robert Wilson	171.18	“	0.1 “	0.1 “
Rexford, at Aqueduct	Dec. 8, 1898	J. Reepmeyer, Jr.	209.48	Chain	0.1 “	0.1 “
Schenectady	April 3, 1904	W. C. Vrooman	208.66	Staff	0.1 “	0.1 “
Tribes Hill	Jan. 7, 1904	Clarence Hansen	263.71	Chain	0.1 “	0.1 “
Fultonville	April 29, 1906	Ed. P. Ryan	268.69	“	0.1 “	0.1 “
Canajoharie	Sept. 16, 1908	John J. Lyons	277.52	“	0.1 “	0.1 “
Fort Plain	Dec. 30, 1905	Frank Fayant, Jr.	288.66	“	0.1 “	0.1 “
St. Johnsville	Jan. 28, 1913	H. C. Dowling	293.00	“	0.1 “	0.1 “
Little Falls, Paper Co.'s tail-race	1898	C. V. Barrett	320.72	Staff	1 inch	1 inch.
Little Falls, Paper Co.'s head-race	1898	C. V. Barrett	330.92	“	0.1 foot.	0.1 foot.
Little Falls, Astoronga tail-race	1908	Geo. Gressler	317.70	“	0.1 “	0.1 “
Little Falls, Astoronga head-race	1908	Geo. Gressler	333.68	“	1 inch.	1 inch.
Little Falls, above State dam	1898	John Stark	360.31	“	0.1 foot.	0.1 foot.
Herkimer, U. & M. V. Ry. bridge	Nov. 23, 1904	Leo Laschen	377.51	Chain	0.1 “	0.1 “
Herkimer, Washington street bridge	Feb. 4, 1913	Leo Laschen	371.50	“	0.1 “	0.1 “
Ilion, at bridge	Jan. 24, 1913	P. C. Earl.	376.50	“	0.1 “	0.1 “
Frankfort, at bridge	Jan. 25, 1913	C. G. Morse	378.00	“	0.1 “	0.1 “
Utica	Mar. 15, 1905	W. E. Young	391.10	“	0.1 “	0.1 “
Rome, below dam	May 3, 1904	John Phillips	426.46	Staff	0.1 “	0.1 “
Rome, above dam	May 3, 1904	John Phillips	429.73	“	0.1 “	0.1 “
Rome, Floyd avenue	July 9, 1907	G. G. Williams	445.01	Chain	0.1 “	0.1 “
Ridge Mills, below dam	May 3, 1904	Daniel Brown	456.20	Staff	0.1 “	0.1 “
Ridge Mills, above dam	May 3, 1904	Daniel Brown	465.22	“	0.1 “	0.1 “
Delta dam, above	April —, 1913	Michael McCurn	*d*	“	0.1 “	0.1 “
Stony creek — Crescent	April 13, 1912	Wm. Jones	*	“	0.1 “	0.1 “
Schoharie creek:						
Fort Hunter	Sept. 24, 1898	H. A. Hockel	277.50	Chain	0.1 “	0.1 “
Central Bridge	April 3, 1904	A. M. Spencer	*b* 565.96	“	0.1 “	0.1 “
Middleburg	Aug. 24, 1906	Minnie E. Wheeler	*	Staff	0.1 “	0.1 “
East Canada creek:						
Dolgeville, below dam	1898	Godfrey Aman	*	“	0.1 “	0.1 “
Dolgeville, above dam	1898	Godfrey Aman	*	“	0.1 “	0.1 “
West Canada creek:						
Kast Bridge	May 15, 1904	Lloyd Kast	414.24	Tape	0.01 “	0.01 “
Poland	July 3, 1908	Clarence Fitch	*	Chain	0.1 “	0.1 “
Trenton Falls, above Morgan dam	Feb. 8, 1904	C. W. Young	751.26	Staff	0.1 “	0.1 “
Trenton Falls, above Power Co.'s dam	Feb. 8, 1904	C. W. Young	1,009.48	“	1 inch.	1 inch.
Grant, Twin Rock bridge	Sept. 7, 1909	Frank McArthur	*a* 1135.07	Tape	0.01 foot.	0.01 foot.
Wilmurt, near	June 28, 1909	Louis Fagan	*	Chain	0.1 “	0.1 “
Nine Mile creek — Stittville	Nov. 4, 1905	Maria Powell	481.72	“	0.1 “	0.1 “

* Arbitrary datum. *a* Weather Bureau datum. *b* U. S. G. S. datum. *d* Directly read to Barge canal datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Waterford, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	16.50	16.00	16.00	21.30	15.75	16.35	13.95	15.00	15.00	14.60	16.05	16.05
2.....	16.35	16.00	15.75	20.00	15.35	16.10	13.70	15.05	15.20	14.85	16.10	16.30
3.....	16.25	15.95	15.40	18.95	15.40	15.75	13.60	15.05	14.35	14.95	16.05	16.30
4.....	18.70	15.50	15.20	18.30	15.15	15.50	13.55	15.15	14.35	15.10	15.95	16.35
5.....	17.80	15.45	15.00	18.00	15.25	15.20	13.60	15.05	14.25	15.25	15.85	16.05
6.....	17.55	15.25	14.90	18.70	14.85	14.90	13.70	15.05	14.15	15.40	15.70	16.00
7.....	17.65	15.20	14.85	18.35	14.95	14.95	13.70	14.95	14.65	15.40	15.75	16.05
8.....	18.80	15.25	14.70	17.85	14.75	14.55	13.65	14.90	15.10	15.25	15.75	16.85
9.....	19.65	15.15	14.55	17.15	15.05	14.35	13.50	14.95	14.30	15.15	15.95	17.00
10.....	18.35	15.35	15.45	16.90	14.85	14.10	13.60	15.10	14.65	15.00	19.70	16.85
11.....	17.60	15.40	16.70	16.45	14.55	13.95	13.40	15.20	14.45	15.05	20.65	16.75
12.....	17.65	15.20	17.35	18.30	14.55	14.15	13.45	14.80	14.30	15.25	18.85	16.35
13.....	18.15	15.00	16.90	18.05	14.40	14.20	13.55	14.60	14.65	15.45	18.00	16.35
14.....	17.20	15.05	17.00	17.70	14.35	14.00	13.45	14.40	14.95	14.95	17.45	16.40
15.....	17.00	14.95	19.75	17.10	14.45	13.85	13.30	14.05	14.90	14.90	17.25	16.70
16.....	16.40	15.00	20.35	16.75	14.45	13.85	13.40	13.65	14.05	14.90	17.05	16.60
17.....	16.45	14.95	19.45	16.35	14.30	13.80	13.60	14.45	13.80	15.10	16.85	16.40
18.....	19.00	14.95	18.00	16.35	14.45	13.65	13.35	14.75	14.45	14.90	16.45	16.25
19.....	19.70	15.00	17.20	16.15	14.45	13.65	13.60	14.55	14.45	15.20	16.45	16.20
20.....	19.35	14.95	17.15	16.05	14.30	13.70	13.60	14.25	14.60	15.30	16.40	16.15
21.....	18.85	14.75	18.20	16.00	14.20	13.75	13.90	14.15	15.05	15.10	17.15	15.85
22.....	19.15	14.95	19.15	15.85	14.25	13.75	14.00	13.70	15.10	16.50	17.45	15.95
23.....	18.45	15.50	19.50	15.75	14.25	13.95	14.90	13.75	14.90	16.65	17.10	15.95
24.....	18.05	15.85	18.75	15.55	15.35	13.75	14.95	14.80	14.95	16.35	16.85	15.95
25.....	18.00	15.65	19.15	15.50	16.15	13.85	14.90	14.75	15.55	16.15	16.50	15.95
26.....	17.35	15.30	24.06	15.50	15.85	13.80	15.10	14.40	15.35	16.30	16.30	16.00
27.....	17.15	15.25	29.13	15.45	15.55	13.85	15.05	14.45	15.15	17.30	16.25	16.15
28.....	16.80	15.30	34.45	15.35	15.30	13.75	15.20	14.25	15.35	17.25	16.25	15.95
29.....	16.25	......	34.96	15.75	16.90	13.90	14.90	14.50	15.30	16.75	16.20	15.75
30.....	16.00	......	29.13	15.90	17.95	13.90	14.85	14.85	14.60	16.45	16.05	15.75
31.....	15.90	......	22.45	......	17.10	......	14.90	14.90	......	16.45	......	15.90

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above Dam at Cohoes, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	156.72	156.62	156.72	157.52	156.37	156.92	158.77	154.47	157.52	153.27	157.82	156.22
2.....	156.92	157.37	156.62	157.42	156.22	156.37	157.02	155.47	157.17	156.67	159.12	156.82
3.....	156.72	157.17	156.27	157.02	156.12	156.37	156.47	155.07	154.57	158.92	157.07	156.92
4.....	158.07	156.27	156.22	156.92	156.47	156.27	158.67	157.57	153.17	156.12	157.42	156.87
5.....	157.72	156.12	156.17	157.02	156.17	156.07	159.12	155.27	153.22	160.22	157.22	156.37
6.....	157.27	156.32	156.12	157.37	155.92	155.87	159.22	155.92	152.77	159.47	157.32	156.62
7.....	157.32	156.12	155.97	156.87	155.92	156.07	157.32	155.62	156.27	158.77	157.12	157.02
8.....	158.02	156.22	156.12	156.77	155.92	155.87	155.17	154.32	156.07	157.42	158.02	157.27
9.....	158.57	156.42	156.37	156.52	155.92	153.17	156.82	154.52	155.12	157.72	158.92	157.37
10.....	157.72	156.22	156.27	156.47	155.97	[a]	156.72	156.62	153.67	154.87	161.02	157.12
11.....	157.42	156.22	157.12	156.52	156.07	155.67	155.72	158.42	153.57	158.02	159.97	156.97
12.....	157.77	156.17	157.17	157.62	155.67	156.42	154.17	156.57	153.87	159.02	158.42	156.37
13.....	157.47	156.17	157.07	157.62	155.62	155.47	157.37	155.07	155.07	157.77	157.67	156.97
14.....	157.22	156.27	157.27	157.17	154.87	155.37	157.77	154.57	157.42	155.92	157.27	157.22
15.....	157.12	156.37	158.32	157.02	155.37	156.37	156.62	154.27	156.82	156.67	157.47	156.87
16.....	156.87	156.47	159.12	156.72	155.22	154.92	156.72	155.27	156.72	156.87	157.37	157.02
17.....	156.87	156.17	158.72	156.57	155.77	153.92	156.47	158.07	156.57	155.32	156.97	156.87
18.....	158.57	156.17	157.42	156.47	155.92	154.67	156.27	158.52	155.32	157.37	156.82	156.47
19.....	158.97	156.17	156.97	156.62	155.67	154.02	156.37	156.87	154.07	159.97	156.72	156.42
20.....	158.22	156.17	156.92	156.72	155.57	155.52	158.12	155.27	153.02	158.67	156.77	156.42
21.....	157.92	156.12	157.02	156.47	155.22	157.67	157.42	154.47	155.97	158.02	157.87	156.87
22.....	157.97	156.32	157.92	156.47	155.07	159.22	155.87	154.92	155.62	160.32	157.92	155.97
23.....	157.82	156.62	158.02	156.42	155.42	158.17	155.02	153.97	156.67	160.12	157.97	155.92
24.....	157.32	156.32	157.37	156.27	156.67	156.52	155.07	154.02	153.32	159.47	156.97	155.77
25.....	157.52	156.62	157.42	156.32	156.62	155.92	155.87	153.52	153.62	159.47	156.82	155.77
26.....	157.47	156.52	158.52	156.47	156.57	158.47	155.87	153.72	155.82	160.02	156.62	156.02
27.....	156.92	156.42	160.82	156.52	156.32	156.82	156.97	154.07	156.67	160.27	157.02	156.02
28.....	156.82	156.42	161.22	156.17	156.22	157.62	157.87	154.42	159.17	160.17	156.42	155.92
29.....	156.62	......	159.77	156.32	157.37	159.47	156.97	154.92	156.42	159.42	156.67	155.42
30.....	156.42	......	158.72	156.52	157.62	158.82	155.32	154.62	153.42	158.92	156.72	155.37
31.....	156.47	......	157.67	......	156.92	......	154.57	155.77	......	158.52	......	155.82

[a] No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Dunsbach Ferry, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.*a*	Aug.*a*	Sept.*a*	Oct.*a*	Nov.	Dec.
1913.												
1.....	173.34	171.94	*a*	*a*	171.88	171.78	......	......	......	......	*a*	171.63
2.....	173.34	171.94	*a*	*a*	171.73	171.73	......	......	......	......	*a*	171.93
3.....	173.54	171.94	*a*	*a*	171.58	171.68	......	......	......	......	*a*	172.18
4.....	173.84	172.14	*a*	*a*	171.43	171.68	......	......	......	......	*a*	172.28
5.....	173.94	172.14	*a*	*a*	171.23	171.58	......	......	......	......	*a*	172.18
6.....	174.24	171.94	*a*	*a*	*a*	171.38	......	......	......	......	*a*	172.18
7.....	174.74	171.94	*a*	*a*	*a*	171.23	......	......	......	......	*a*	172.08
8.....	175.34	171.94	172.14	*a*	*a*	*a*	......	......	......	......	*a*	171.98
9.....	175.14	*a*	172.24	*a*	*a*	*a*	......	......	......	......	173.48	171.88
10.....	174.94	*a*	172.54	*a*	*a*	*a*	......	......	......	......	176.48	171.73
11.....	174.74	*a*	172.84	*a*	*a*	*a*	......	......	......	......	175.58	171.68
12.....	174.44	*a*	173.04	*a*	*a*	*a*	......	......	......	......	173.28	171.58
13.....	174.14	*a*	174.34	*a*	*a*	*a*	......	......	......	......	173.18	171.58
14.....	174.04	*a*	176.14	*a*	*a*	*a*	......	......	......	......	173.08	171.38
15.....	174.24	*a*	175.04	*a*	*a*	*a*	......	......	......	......	173.08	171.28
16.....	174.84	*a*	174.74	*a*	*a*	*a*	......	......	......	......	173.28	*a*
17.....	175.84	*a*	174.54	*a*	*a*	*a*	......	......	......	......	173.28	*a*
18.....	176.14	*a*	174.34	*a*	*a*	*a*	......	......	......	......	173.18	*a*
19.....	176.04	*a*	174.34	*a*	*a*	*a*	......	......	......	......	172.98	*a*
20.....	175.64	*a*	174.34	*a*	*a*	*a*	......	......	......	......	172.88	*a*
21.....	175.24	*a*	174.34	*a*	*a*	*a*	......	......	......	......	172.68	*a*
22.....	174.44	*a*	175.34	*a*	*a*	*a*	......	......	......	......	172.38	*a*
23.....	174.14	*a*	175.24	*a*	171.28	*a*	......	......	......	......	172.28	*a*
24.....	173.84	*a*	174.54	171.58	172.23	*a*	......	......	......	......	172.08	*a*
25.....	173.74	*a*	175.39	171.48	172.28	*a*	......	......	......	......	171.88	*a*
26.....	173.44	*a*	178.24	171.38	171.98	*a*	......	......	......	......	171.73	*a*
27.....	173.24	*a*	*a*	171.48	172.13	*a*	......	......	......	......	171.63	*a*
28.....	172.64	*a*	*a*	171.83	172.38	*a*	......	......	......	......	171.58	*a*
29.....	172.34	......	*a*	172.33	172.18	*a*	......	......	......	......	171.58	*a*
30.....	172.04	......	*a*	172.23	172.03	*a*	......	......	......	......	171.58	*a*
31.....	171.94	......	*a*	......	171.88	......	......	......	......	......	......	*a*

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Aqueduct at Rexford, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	211.41	210.76	210.56	212.46	210.21	*a*	211.36	211.26	211.28	211.28	211.58	211.98
2.....	211.91	210.76	210.56	212.21	210.11	*a*	211.36	211.26	211.28	211.28	211.58	211.88
3.....	212.56	210.76	210.46	211.91	210.06	*a*	211.36	211.06	211.28	211.48	211.58	211.88
4.....	213.46	210.76	210.56	211.66	210.06	*a*	211.36	211.06	211.28	211.38	211.58	211.88
5.....	212.86	210.76	210.56	211.56	209.96	*a*	211.36	211.01	211.28	211.38	211.58	211.88
6.....	212.26	210.76	210.56	211.46	209.96	*a*	211.36	*a*	211.28	211.28	211.58	211.78
7.....	212.01	210.76	210.56	211.61	209.86	*a*	211.36	*a*	211.28	211.28	211.78	211.68
8.....	212.66	210.76	210.66	211.56	209.76	209.56	211.36	*a*	211.28	211.28	211.78	211.68
9.....	213.86	210.76	210.71	211.46	209.66	209.86	211.36	*a*	211.28	211.28	211.78	211.58
10.....	213.41	210.76	210.81	211.51	209.61	211.31	211.36	*a*	211.28	211.28	215.88	211.58
11.....	212.96	210.76	211.16	212.06	209.56	211.56	211.36	*a*	211.28	211.28	214.08	211.58
12.....	213.21	210.76	211.16	212.66	209.46	211.56	211.36	*a*	211.28	211.28	212.38	211.58
13.....	213.01	210.76	211.31	212.21	209.36	211.46	211.36	*a*	211.28	211.28	212.23	211.58
14.....	212.46	210.76	211.86	211.81	209.26	211.41	211.36	*a*	211.28	211.28	212.18	211.58
15.....	212.31	210.76	213.06	211.36	209.16	211.46	211.36	211.38	211.28	211.33	212.13	211.58
16.....	212.81	210.76	213.51	211.21	209.16	211.36	211.36	211.38	211.28	211.38	212.08	211.58
17.....	213.06	210.76	212.41	211.16	209.16	211.36	211.36	211.28	211.28	211.38	212.08	211.58
18.....	213.46	210.76	211.56	211.16	209.26	211.41	211.36	211.28	211.28	211.38	212.08	211.58
19.....	214.01	210.76	211.21	211.06	209.26	211.36	211.36	211.28	211.28	211.38	212.08	211.58
20.....	212.71	210.76	211.06	211.06	209.36	211.36	211.36	211.28	211.28	211.43	212.23	211.58
21.....	212.51	210.76	211.26	211.06	209.36	211.36	211.36	211.28	211.38	211.48	212.38	211.58
22.....	212.11	210.76	211.16	210.96	209.46	211.36	211.36	211.28	211.38	211.48	212.38	211.58
23.....	211.86	210.76	211.26	210.51	209.51	211.36	211.36	211.28	211.33	211.48	212.38	211.58
24.....	211.51	210.76	211.91	210.16	210.71	211.36	211.36	211.28	211.28	211.53	212.38	211.58
25.....	211.26	210.76	213.41	210.06	210.51	211.36	211.36	211.28	211.28	211.78	212.28	211.58
26.....	211.16	210.76	216.26	209.96	210.36	211.36	211.36	211.28	211.23	211.78	212.18	211.58
27.....	211.06	210.76	......	209.91	210.31	211.36	211.36	211.28	211.23	211.68	212.08	211.58
28.....	210.96	210.96	......	209.91	210.26	211.36	211.36	211.28	211.23	211.68	211.98	211.58
29.....	210.96	......	216.31	210.01	210.26	211.36	211.36	211.28	211.23	211.68	211.98	211.58
30.....	210.86	......	215.21	210.41	210.16	211.36	211.36	211.28	211.23	211.68	211.98	211.58
31.....	210.86	......	212.96	......	210.16	......	211.36	211.28	......	211.63	......	211.58

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Schenectady, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	213.36	211.21	211.36	214.26	211.46	211.01	211.56	211.36	211.36	211.46	211.66	211.86
2.....	213.31	211.21	210.76	213.51	210.96	210.66	211.46	211.46	211.36	211.46	211.66	212.16
3.....	212.86	210.81	210.86	212.51	210.21	210.56	211.46	211.36	211.36	211.51	211.61	212.21
4.....	215.91	210.66	210.46	212.11	210.06	210.21	211.36	211.36	211.36	211.51	211.56	211.91
5.....	213.46	210.91	210.16	212.36	209.96	209.91	211.36	211.46	211.36	211.56	211.56	211.76
6.....	213.16	210.56	210.16	212.81	209.71	209.81	211.41	211.46	211.36	211.56	211.66	211.76
7.....	214.56	210.21	210.16	212.46	209.91	209.71	211.36	211.51	211.36	211.56	211.66	212.91
8.....	215.51	210.16	210.16	212.06	209.76	209.41	211.36	211.36	211.36	211.56	211.66	212.41
9.....	215.41	210.16	210.16	211.26	209.81	209.51	211.36	211.36	211.36	211.56	212.21	213.16
10.....	214.46	210.16	212.06	211.01	209.81	210.06	211.46	211.36	211.36	211.56	219.04	212.31
11.....	213.46	210.16	212.06	211.66	209.56	211.66	211.36	211.36	211.36	211.46	215.96	212.26
12.....	213.61	210.16	212.71	213.91	209.46	211.61	211.36	211.36	211.36	211.46	213.26	211.91
13.....	213.91	210.16	212.51	213.41	209.26	211.46	211.36	311.36	311.36	211.41	212.66	212.01
14.....	212.66	210.16	213.51	212.71	209.31	211.46	211.46	211.36	211.41	211.36	212.61	212.06
15.....	210.91	210.16	216.06	211.91	209.31	211.46	211.36	211.36	211.46	211.36	212.56	212.06
16.....	210.96	210.16	216.41	211.61	209.31	211.41	211.36	211.36	211.56	211.36	212.46	212.16
17.....	212.56	210.16	214.51	211.31	209.26	211.51	211.36	211.36	211.36	211.46	212.26	212.26
18.....	216.11	210.16	214.16	211.01	209.26	211.41	211.36	211.36	211.36	211.36	211.96	211.96
19.....	216.81	210.16	211.91	210.76	209.26	211.56	211.36	211.46	211.36	211.36	211.91	211.66
20.....	215.16	210.16	212.21	210.96	209.21	211.56	211.36	211.46	211.36	211.46	212.51	211.66
21.....	214.51	210.26	213.56	211.01	209.21	211.46	211.36	211.41	211.36	211.46	213.26	211.66
22.....	214.01	210.61	214.91	210.61	209.16	211.51	211.36	211.36	211.41	211.56	212.91	211.66
23.....	213.66	211.16	214.06	210.51	209.46	211.46	211.36	211.36	211.61	212.36	213.16	211.66
24.....	213.26	211.16	213.91	210.46	210.06	211.36	211.36	211.36	211.86	211.86	212.31	211.66
25.....	212.91	211.16	214.11	210.46	211.66	211.41	211.36	211.36	211.51	211.91	212.06	211.61
26.....	212.51	211.16	221.01	210.46	210.91	211.56	211.51	211.36	211.36	212.01	212.26	211.46
27.....	212.16	211.16	225.66	210.26	210.41	211.46	211.41	211.36	211.46	212.76	212.06	211.46
28.....	211.91	210.76	227.76	210.36	210.61	211.41	211.36	211.36	211.46	212.61	211.91	211.46
29.....	211.31	......	220.96	210.46	214.51	211.56	211.46	211.36	211.36	212.11	211.81	211.46
30.....	211.06	......	215.66	211.31	213.26	211.61	211.36	211.36	211.41	212.01	211.71	211.46
31.....	210.91	......	214.06	......	211.66	......	211.36	211.36	......	211.91	......	211.66

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Tribes Hill, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	270.71	270.01	270.66	272.81	269.96	270.71	267.86	267.76	267.61	267.71	270.11	268.91
2.....	270.96	269.76	270.11	272.01	269.76	270.61	267.86	267.71	267.61	267.71	270.11	268.81
3.....	271.56	269.31	269.71	271.36	269.66	269.51	267.86	267.91	267.51	268.11	270.21	268.81
4.....	273.21	269.31	269.31	271.01	269.76	268.81	267.71	267.91	267.51	268.61	270.21	268.71
5.....	272.26	269.36	268.91	271.21	269.41	268.71	267.81	267.91	267.41	268.71	270.21	268.71
6.....	272.41	269.31	268.71	271.11	269.16	268.51	267.91	267.81	267.41	268.71	270.21	268.71
7.....	272.86	269.31	268.51	270.91	268.96	268.71	267.86	267.81	267.41	268.61	270.41	268.71
8.....	273.86	269.31	268.31	270.71	268.76	268.71	267.76	267.81	267.41	268.61	270.61	268.71
9.....	273.01	269.11	268.61	270.51	268.61	268.51	267.61	267.71	267.41	268.51	275.71	268.51
10.....	272.01	269.11	270.66	270.61	268.31	268.31	267.56	267.71	267.31	268.31	274.71	268.21
11.....	272.56	269.01	271.21	271.11	268.31	268.11	267.51	267.61	267.31	268.01	274.51	268.21
12.....	272.61	268.91	271.31	271.51	268.31	267.91	267.66	267.56	267.31	268.31	273.71	268.31
13.....	271.41	268.91	271.31	271.81	268.31	267.81	267.56	267.51	267.21	268.21	273.61	268.61
14.....	270.81	268.71	272.06	271.71	268.41	267.71	267.51	267.41	267.21	268.11	271.91	268.51
15.....	270.51	268.71	273.76	271.66	268.31	267.11	267.46	267.41	267.21	268.11	269.91	268.61
16.....	270.26	268.71	273.66	270.71	268.21	267.81	267.41	267.61	267.31	268.01	269.91	269.41
17.....	270.91	268.71	272.46	270.41	268.21	268.31	267.51	267.71	267.31	268.01	269.91	269.61
18.....	273.51	268.71	271.11	270.16	268.21	267.11	267.71	267.61	267.41	267.71	269.81	269.61
19.....	273.51	268.71	270.71	270.11	268.11	267.11	267.76	267.61	267.41	267.71	270.01	269.41
20.....	272.91	268.85	271.11	270.51	268.06	268.11	267.71	267.51	267.31	267.81	270.01	268.71
21.....	273.21	269.01	272.06	270.16	268.06	269.26	267.71	267.51	267.61	268.81	270.51	268.51
22.....	272.51	269.06	272.91	270.11	268.21	267.61	267.71	267.41	267.61	269.01	270.61	268.51
23.....	271.91	270.01	271.96	269.86	268.76	266.61	267.61	267.41	267.91	270.51	270.41	268.31
24.....	271.71	270.11	271.46	269.96	271.01	267.31	267.61	267.41	268.01	270.46	270.31	268.31
25.....	271.41	270.01	272.56	269.91	270.41	267.66	267.56	267.41	268.11	269.71	269.71	267.91
26.....	270.81	270.01	276.51	269.51	270.51	267.21	267.51	267.51	268.11	269.91	269.71	268.21
27.....	270.71	270.01	279.26	269.31	270.41	268.11	267.61	267.51	267.91	270.51	269.91	268.41
28.....	270.61	270.01	278.71	269.31	270.31	268.36	267.71	267.61	267.71	270.51	269.71	268.61
29.....	270.21	......	275.46	269.36	271.06	268.26	267.71	267.71	267.71	270.41	269.11	268.61
30.....	269.71	......	273.11	270.06	271.21	268.21	267.71	267.71	267.61	270.41	268.91	268.61
31.....	270.21	......	272.51	......	270.71	......	267.71	267.61	......	270.41	......	268.61

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Schoharie Creek at Fort Hunter, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	282.65	282.00	282.00	282.85	282.55	282.00	280.40	278.85	278.45	279.80	281.70	282.15
2.....	282.45	281.90	282.15	282.65	282.35	281.90	280.10	278.90	278.50	280.05	281.65	282.25
3.....	282.40	281.85	281.95	282.50	282.15	281.90	280.05	278.90	278.50	280.75	281.60	282.10
4.....	283.90	281.80	281.75	282.40	282.00	281.80	279.35	278.90	278.60	281.75	281.50	282.00
5.....	283.10	281.70	281.55	282.45	282.00	281.80	279.65	278.80	279.00	281.65	281.40	282.00
6.....	282.80	281.70	281.25	282.40	281.90	281.70	279.35	278.80	278.65	281.50	281.25	281.95
7.....	283.85	281.60	281.10	282.30	281.90	281.60	279.35	278.65	278.60	281.35	281.05	282.05
8.....	285.30	281.60	281.00	282.20	281.80	281.60	279.20	278.45	278.60	280.95	280.95	282.60
9.....	284.40	281.50	281.10	282.10	281.80	281.60	279.10	278.30	278.60	280.85	283.40	282.25
10.....	283.50	281.45	281.90	282.10	281.70	281.60	279.25	278.30	278.60	280.75	286.35	282.10
11.....	282.80	281.40	282.35	282.60	281.70	281.50	279.20	279.60	278.50	280.55	285.05	282.00
12.....	282.70	281.35	282.10	282.95	281.70	281.50	279.10	278.95	278.50	280.35	283.30	282.00
13.....	282.55	281.30	281.90	282.80	281.60	281.40	279.10	278.80	278.50	280.30	282.75	281.90
14.....	282.45	281.25	282.10	282.70	281.60	281.30	279.20	278.65	278.50	280.35	282.40	281.90
15.....	282.35	281.20	284.20	282.55	281.60	281.05	279.10	278.50	278.50	281.10	282.30	282.00
16.....	282.25	281.20	283.65	282.40	281.50	280.85	278.95	278.40	278.40	281.55	282.25	281.90
17.....	282.30	281.10	283.10	282.30	281.50	280.65	278.75	278.50	278.40	280.90	282.20	282.00
18.....	283.45	281.10	282.75	282.20	281.50	280.45	278.60	278.45	278.30	280.55	282.10	281.90
19.....	283.15	281.05	282.35	282.10	281.50	280.40	278.50	278.40	278.55	280.20	281.95	281.80
20.....	282.80	281.00	282.10	282.10	281.40	280.30	278.90	278.40	278.45	280.40	282.05	281.80
21.....	282.85	281.05	282.80	282.00	281.40	280.35	279.90	278.30	278.35	283.20	281.95	281.80
22.....	282.80	281.25	282.65	282.00	281.40	280.45	279.05	278.30	278.90	282.25	281.85	281.70
23.....	282.70	281.25	282.55	282.00	281.35	280.55	278.40	278.55	280.10	282.05	282.05	281.70
24.....	282.55	281.15	283.00	281.90	282.15	280.80	278.15	278.65	281.90	281.75	282.00	281.70
25.....	282.45	281.10	284.45	281.90	282.25	280.55	278.95	278.60	281.65	281.50	282.00	281.60
26.....	282.85	281.00	285.50	281.90	282.20	280.55	278.65	278.65	280.90	282.15	281.90	281.60
27.....	282.30	281.05	287.30	281.80	282.05	281.20	278.60	278.65	280.05	282.75	281.90	281.50
28.....	282.25	281.30	285.80	281.80	281.90	281.45	278.90	278.40	279.95	282.65	281.80	281.40
29.....	282.20	......	283.95	282.85	282.00	281.05	280.15	278.10	279.90	282.25	281.80	281.40
30.....	282.10	......	283.25	282.85	282.00	280.15	279.65	278.00	279.80	282.00	281.95	281.30
31.....	282.00	......	283.05	......	281.90	......	278.40	278.05	......	281.85	......	281.30

Mean Daily Elevation of Water-surface (U. S. G. S. Datum) of Schoharie Creek near Central Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	569.81	568.86	573.06	570.96	569.06	568.71	567.11	566.58	566.41	566.84	568.24	568.16
2.....	569.11	568.31	571.66	570.31	568.84	568.58	567.11	566.58	566.41	566.88	568.14	568.16
3.....	570.56	568.28	571.21	569.91	568.64	568.51	567.08	566.56	566.38	568.26	568.04	568.16
4.....	572.56	568.41	570.76	569.74	568.51	568.34	567.06	566.56	566.46	567.74	567.91	568.11
5.....	570.36	568.61	570.13	569.91	568.38	568.21	567.06	566.56	566.41	567.84	567.84	568.11
6.....	569.91	568.71	569.41	569.71	568.24	568.14	567.01	566.71	566.41	567.74	567.78	568.11
7.....	570.76	568.88	569.46	569.58	568.11	568.06	566.96	566.88	566.41	567.61	567.71	568.28
8.....	575.06	569.01	569.86	569.41	567.98	567.94	566.96	566.96	566.41	567.44	567.58	569.11
9.....	572.26	569.28	570.16	569.11	567.88	567.86	566.96	566.94	566.36	567.28	574.04	568.56
10.....	570.31	569.38	573.91	568.91	567.86	567.84	566.94	566.88	566.36	567.18	577.61	568.34
11.....	570.36	569.44	570.66	569.91	567.81	567.78	566.91	566.64	566.36	567.08	571.76	568.28
12.....	571.51	569.34	569.46	570.51	567.81	567.74	566.91	566.56	566.36	566.98	570.21	568.26
13.....	571.11	569.26	569.04	569.96	567.78	567.64	566.88	566.54	566.36	566.96	569.76	568.21
14.....	569.86	569.18	570.81	569.71	567.76	567.54	566.86	566.51	566.31	566.96	569.58	568.18
15.....	569.76	569.16	571.86	569.51	567.71	567.46	566.81	566.48	566.31	566.94	569.44	568.16
16.....	569.56	569.14	571.11	569.34	567.68	567.34	566.81	566.46	566.31	566.91	569.34	568.11
17.....	571.71	569.08	569.66	569.21	567.64	567.24	566.78	566.46	566.34	566.84	569.24	568.06
18.....	570.51	569.01	569.36	568.94	567.58	567.14	566.76	566.46	566.36	566.78	569.16	568.01
19.....	569.96	568.86	569.36	568.74	567.56	567.08	566.74	566.56	566.36	566.78	569.11	567.94
20.....	569.51	568.76	569.56	568.54	567.54	567.06	566.71	567.06	566.41	567.31	569.01	567.86
21.....	569.36	568.91	570.11	568.48	567.51	567.24	566.71	566.88	566.51	570.01	568.81	567.84
22.....	569.36	569.16	570.21	568.44	567.48	567.18	566.71	566.64	567.96	568.81	568.71	567.81
23.....	569.41	569.26	569.96	568.41	568.01	567.11	566.68	566.56	569.06	568.26	568.56	567.81
24.....	570.11	570.21	570.01	568.36	569.84	567.11	566.66	566.51	568.31	567.91	568.38	567.86
25.....	569.56	569.71	570.26	568.31	569.36	567.08	566.66	566.48	567.51	567.86	568.26	567.94
26.....	569.31	569.41	574.01	568.31	568.71	567.06	566.64	566.46	567.31	569.61	568.24	568.11
27.....	569.24	569.31	581.46	568.26	568.54	567.04	566.64	566.61	567.14	570.66	568.21	568.26
28.....	569.06	572.96	577.26	568.66	568.51	567.41	566.61	566.48	567.04	569.44	568.21	568.11
29.....	568.84	......	572.41	571.36	570.76	567.36	566.61	566.44	566.88	568.86	568.21	568.04
30.....	568.76	......	571.38	569.96	569.61	567.14	566.61	566.41	566.86	568.64	568.16	567.88
31.....	568.74	......	571.11	......	569.11	......	566.61	566.41	......	568.41	......	567.81

Table showing Drainage Areas used previous to 1913 in estimating Run-off of Mohawk River and Tributaries at certain Gaging Stations; together with latest determination of these Areas from U. S. Geological Survey Topographic Maps — (Concluded).

STREAM.	Gaging station.	DRAINAGE AREAS IN SQUARE MILES.	
		Formerly used.	From U. S. G. S. maps.
Schoharie creek.......	Fort Hunter....................	947	909.3
	Schoharie Falls...................	930	....
	Middleburg.....................	....	527.4
	Prattsville.....................	243	238.4
Cayadutta creek......	Near Johnstown.................	40	41.5
Garoga creek.........	Near Fort Plain................	80.8	....
East Canada creek....	Dolgeville......................	256	....
West Canada creek...	Kast Bridge....................	574 (1903)	574.8
	Poland.........................	....	470.1
	Middleville.....................	519 (U. S. D. W.)	527.3
	Trenton Falls..................	375	375.8
	Twin Rock bridge...............	364	364.4
Sauquoit creek.......	New York Mills.................	51.5	50.9
Oriskany creek.......	State feeder dam...............	144	146.0
Nine-Mile creek......	Stittville, Powell's bridge.........	62.6	59.1

MOHAWK RIVER WATER-SURFACE ELEVATION RECORDS.

The following tables give records of the mean daily elevation of water-surface of the Mohawk river at different gaging stations for 1913. The elevations are referred to Barge canal datum, which is equivalent to mean tide in New York, taken as elevation 14.73 below the old grist mill bench-mark at Greenbush (Rensselaer).

The tables of elevations of water-surface are arranged in order proceeding upstream from the junction of the Mohawk river with the Hudson river at Waterford, to Delta.

An accompanying table gives details as to the types of gages used, the datum of each and the manner in which they are read.

Water-surface Elevation Gages Maintained on Mohawk River and Tributaries During the Year 1913.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to —
Mowhawk river:						
Waterford	Jan. 15, 1907	Barge canal employee.	0.00	Staff	0.1 foot.	0.1 foot.
Cohoes	Dec. —, 1903	Jas. Murphy	153.47	"	0.1 "	0.1 "
Dunsbach Ferry, Emerick	Mar. 12, 1898	Robert Wilson	171.18	"	0.1 "	0.1 "
Rexford, at Aqueduct	Dec. 8, 1898	J. Reepmeyer, Jr.	209.48	Chain	0.1 "	0.1 "
Schenectady	April 3, 1904	W. C. Vrooman	208.66	Staff	0.1 "	0.1 "
Tribes Hill	Jan. 7, 1904	Clarence Hansen	263.71	Chain	0.1 "	0.1 "
Fultonville	April 29, 1906	Ed. P. Ryan	268.69	"	0.1 "	0.1 "
Canajoharie	Sept. 16, 1908	John J. Lyons	277.52	"	0.1 "	0.1 "
Fort Plain	Dec. 30, 1905	Frank Fayant, Jr.	288.66	"	0.1 "	0.1 "
St. Johnsville	Jan. 28, 1913	H. C. Dowling	298.00	"	0.1 "	0.1 "
Little Falls, Paper Co.'s tail-race	1898	C. V. Barrett	320.72	Staff	1 inch	1 inch.
Little Falls, Paper Co.'s head-race	1898	C. V. Barrett	330.92	"	0.1 foot.	0.1 foot.
Little Falls, Astoronga tail-race	1908	Geo. Gressler	317.70	"	0.1 "	0.1 "
Little Falls, Astoronga head-race	1908	Geo. Gressler	333.68	"	1 inch	1 inch.
Little Falls, above State dam	1898	John Stark	360.31	"	0.1 foot.	0.1 foot.
Herkimer, U. & M. V. Ry. bridge	Nov. 23, 1904	Leo Laschen	377.51	Chain	0.1 "	0.1 "
Herkimer, Washington street bridge	Feb. 4, 1913	Leo Laschen	371.50	"	0.1 "	0.1 "
Ilion, at bridge	Jan. 24, 1913	P. C. Earl.	376.50	"	0.1 "	0.1 "
Frankfort, at bridge	Jan. 25, 1913	C. G. Morse	378.00	"	0.1 "	0.1 "
Utica	Mar. 15, 1905	W. E. Young	391.10	"	0.1 "	0.1 "
Rome, below dam	May 3, 1904	John Phillips	426.46	Staff	0.1 "	0.1 "
Rome, above dam	May 3, 1904	John Phillips	429.73	"	0.1 "	0.1 "
Rome, Floyd avenue	July 9, 1907	G. G. Williams	445.01	Chain	0.1 "	0.1 "
Ridge Mills, below dam	May 3, 1904	Daniel Brown	456.20	Staff	0.1 "	0.1 "
Ridge Mills, above dam	May 3, 1904	Daniel Brown	465.22	"	0.1 "	0.1 "
Delta dam, above	April —, 1913	Michael McCurn	*d*	"	0.1 "	0.1 "
Stony creek — Crescent	April 13, 1912	Wm. Jones	*	"	0.1 "	0.1 "
Schoharie creek:						
Fort Hunter	Sept. 24, 1898	H. A. Hockel	277.50	Chain	0.1 "	0.1 "
Central Bridge	April 3, 1904	A. M. Spencer	*b* 565.96	"	0.1 "	0.1 "
Middleburg	Aug. 24, 1906	Minnie E. Wheeler	*	Staff	0.1 "	0.1 "
East Canada creek:						
Dolgeville, below dam	1898	Godfrey Aman	*	"	0.1 "	0.1 "
Dolgeville, above dam	1898	Godfrey Aman	*	"	0.1 "	0.1 "
West Canada creek:						
Kast Bridge	May 15, 1904	Lloyd Kast	414.24	Tape	0.01 "	0.01 "
Poland	July 3, 1908	Clarence Fitch	*	Chain	0.1 "	0.1 "
Trenton Falls, above Morgan dam	Feb. 8, 1904	C. W. Young	751.26	Staff	0.1 "	0.1 "
Trenton Falls, above Power Co.'s dam	Feb. 8, 1904	C. W. Young	1,000.48	"	1 inch.	1 inch.
Grant, Twin Rock bridge	Sept. 7, 1909	Frank McArthur	*a* 1135.07	Tape	0.01 foot.	0.01 foot.
Wilmurt, near	June 28, 1909	Louis Fagan	*	Chain	0.1 "	0.1 "
Nine Mile creek — Stittville	Nov. 4, 1905	Maria Powell	481.72	"	0.1 "	0.1 "

* Arbitrary datum. *a* Weather Bureau datum. *b* U. S. G. S. datum. *d* Directly read to Barge canal datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Waterford, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	16.50	16.00	16.00	21.30	15.75	16.35	13.95	15.00	15.00	14.60	16.05	16.05
2.....	16.35	16.00	15.75	20.00	15.35	16.10	13.70	15.05	15.20	14.85	16.10	16.30
3.....	16.25	15.95	15.40	18.95	15.40	15.75	13.60	15.03	14.35	14.95	16.05	16.30
4.....	18.70	15.50	15.20	18.30	15.15	15.50	13.55	15.15	14.35	15.10	15.95	16.35
5.....	17.80	15.45	15.00	18.00	15.25	15.20	13.60	15.05	14.25	15.25	15.85	16.05
6.....	17.55	15.25	14.90	18.70	14.85	14.90	13.70	15.05	14.15	15.40	15.70	16.00
7.....	17.65	15.20	14.85	18.35	14.95	14.95	13.70	14.95	14.65	15.40	15.75	16.05
8.....	18.80	15.25	14.70	17.85	14.75	14.55	13.65	14.90	15.10	15.25	15.75	16.85
9.....	19.65	15.15	14.55	17.15	15.05	14.35	13.50	14.95	14.30	15.15	15.95	17.00
10.....	18.35	15.35	15.45	16.90	14.85	14.10	13.60	15.10	14.65	15.00	19.70	16.85
11.....	17.60	15.40	16.70	16.45	14.55	13.95	13.40	15.20	14.45	15.05	20.65	16.75
12.....	17.65	15.20	17.35	18.30	14.55	14.15	13.45	14.80	14.30	15.25	18.85	16.35
13.....	18.15	15.00	16.90	18.05	14.40	14.20	13.55	14.60	14.65	15.45	18.00	16.35
14.....	17.20	15.05	17.00	17.70	14.35	14.00	13.45	14.40	14.95	14.95	17.45	16.40
15.....	17.00	14.95	19.75	17.10	14.45	13.85	13.30	14.05	14.90	14.90	17.25	16.70
16.....	16.40	15.00	20.35	16.75	14.45	13.85	13.40	13.65	14.05	14.90	17.05	16.60
17.....	16.45	14.95	19.45	16.35	14.30	13.80	13.60	14.45	13.80	15.10	16.85	16.40
18.....	19.00	14.95	18.00	16.35	14.45	13.65	13.35	14.75	14.45	14.90	16.45	16.25
19.....	19.70	15.00	17.20	16.15	14.45	13.65	13.60	14.55	14.45	15.20	16.45	16.20
20.....	19.35	14.95	17.15	16.05	14.30	13.70	13.60	14.25	14.60	15.30	16.40	16.15
21.....	18.85	14.75	18.20	16.00	14.20	13.75	13.90	14.15	15.05	15.10	17.15	15.85
22.....	19.15	14.95	19.15	15.85	14.25	13.75	14.00	13.70	15.10	16.50	17.45	15.95
23.....	18.45	15.50	19.50	15.75	14.25	13.95	14.90	13.75	14.90	16.65	17.10	15.95
24.....	18.05	15.85	18.75	15.55	15.35	13.75	14.95	14.80	14.95	16.35	16.85	15.95
25.....	18.00	15.65	19.15	15.50	16.15	13.85	14.90	14.75	15.55	16.15	16.50	15.95
26.....	17.35	15.30	24.06	15.50	15.85	13.80	15.10	14.40	15.35	16.30	16.30	16.00
27.....	17.15	15.25	29.13	15.45	15.55	13.85	15.05	14.45	15.15	17.30	16.25	16.15
28.....	16.80	15.30	34.45	15.35	15.30	13.75	15.20	14.25	15.35	17.25	16.25	15.95
29.....	16.25	......	34.96	15.75	16.90	13.90	14.90	14.50	15.30	16.75	16.20	15.75
30.....	16.00	......	29.13	15.90	17.95	13.90	14.85	14.85	14.60	16.45	16.05	15.75
31.....	15.90	......	22.45	......	17.10	......	14.90	14.90	......	16.45	......	15.90

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above Dam at Cohoes, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	156.72	156.62	156.72	157.52	156.37	156.92	158.77	154.47	157.52	153.27	157.82	156.22
2.....	156.92	157.37	156.62	157.42	156.22	156.37	157.02	155.47	157.17	156.67	159.12	156.82
3.....	156.72	157.17	156.27	157.02	156.12	156.37	156.47	155.07	154.57	158.92	157.07	158.92
4.....	158.07	156.27	156.22	156.92	156.47	156.27	158.67	157.57	153.17	156.12	157.42	156.87
5.....	157.72	156.12	156.17	157.02	156.17	156.07	159.12	155.27	153.22	160.22	157.22	158.37
6.....	157.27	156.32	156.12	157.37	155.92	155.87	159.22	155.92	152.77	159.47	157.32	156.62
7.....	157.32	156.12	155.97	156.87	155.92	156.07	157.32	155.62	156.27	158.77	157.12	157.02
8.....	158.02	156.22	156.12	156.77	155.92	155.87	155.17	154.32	156.07	157.42	158.02	157.27
9.....	158.57	156.42	156.37	156.52	155.92	153.17	156.82	154.52	155.12	157.72	158.92	157.37
10.....	157.72	156.22	156.27	156.47	155.97	*a*	156.72	156.62	153.67	154.87	161.02	157.12
11.....	157.42	156.22	157.12	156.52	156.07	155.67	155.72	158.42	153.57	158.02	159.97	156.97
12.....	157.77	156.17	157.17	157.62	155.67	156.42	154.17	156.57	153.87	159.02	158.42	156.37
13.....	157.47	156.17	157.07	157.62	155.62	155.47	157.37	155.07	155.07	157.77	157.67	156.97
14.....	157.22	156.27	157.27	157.17	154.87	155.37	157.77	154.57	157.42	155.92	157.27	157.22
15.....	157.12	156.37	158.32	157.02	155.37	156.37	156.62	154.27	156.82	156.67	157.47	156.87
16.....	156.87	156.47	159.12	156.72	155.22	154.92	156.72	155.27	156.72	156.87	157.37	157.02
17.....	156.87	156.17	158.72	156.57	155.77	153.92	156.47	158.07	156.57	155.32	156.97	156.87
18.....	158.57	156.17	157.42	156.47	155.92	154.67	156.27	158.52	155.32	157.37	156.82	156.47
19.....	158.97	156.17	156.97	156.62	155.67	154.02	153.37	156.87	154.07	159.97	156.72	156.42
20.....	158.22	156.17	156.92	156.72	155.57	155.52	158.12	155.27	153.02	158.67	156.77	156.42
21.....	157.92	156.12	157.02	156.47	155.22	157.67	157.42	154.47	155.97	158.02	157.87	156.87
22.....	157.97	156.32	157.92	156.47	155.07	159.22	155.87	154.92	155.62	160.32	157.92	155.97
23.....	157.82	156.62	158.02	156.42	155.42	158.17	155.02	153.97	156.67	160.12	157.97	155.92
24.....	157.32	156.32	157.37	156.27	156.67	156.52	155.07	154.02	153.32	159.47	156.97	155.77
25.....	157.52	156.62	157.42	156.32	156.62	155.92	155.87	153.52	153.62	159.47	156.82	155.77
26.....	157.47	156.52	158.52	156.47	156.57	158.47	155.87	153.72	155.82	160.02	156.62	156.02
27.....	156.92	156.42	160.82	156.52	156.32	156.82	156.97	154.07	155.67	160.27	157.02	156.02
28.....	156.82	156.42	161.22	156.17	156.22	157.62	157.87	154.42	159.17	160.17	158.42	155.92
29.....	156.62	......	159.77	156.32	157.37	159.47	156.97	154.92	156.42	159.42	156.67	155.42
30.....	156.42	......	158.72	156.52	157.62	158.82	155.32	154.62	153.42	158.92	156.72	155.37
31.....	156.47	......	157.67	......	156.92	......	154.57	155.77	......	158.52	......	155.82

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Dunsbach Ferry, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.*a*	Aug.*a*	Sept.*a*	Oct.*a*	Nov.	Dec.
1913.												
1.....	173.34	171.94	*a*	*a*	171.88	171.78	......	......	......	......	*a*	171.63
2.....	173.34	171.94	*a*	*a*	171.73	171.73	......	......	......	......	*a*	171.93
3.....	173.54	171.94	*a*	*a*	171.58	171.68	......	......	......	......	*a*	172.18
4.....	173.84	172.14	*a*	*a*	171.43	171.68	......	......	......	......	*a*	172.28
5.....	173.94	172.14	*a*	*a*	171.23	171.58	......	......	......	......	*a*	172.18
6.....	174.24	171.94	*a*	*a*	*a*	171.38	......	......	......	......	*a*	172.18
7.....	174.74	171.94	*a*	*a*	*a*	171.23	......	......	......	......	*a*	172.08
8.....	175.34	171.94	172.14	*a*	*a*	*a*	......	......	......	......	*a*	171.98
9.....	175.14	*a*	172.24	*a*	*a*	*a*	......	......	......	......	173.48	171.88
10.....	174.94	*a*	172.54	*a*	*a*	*a*	......	......	......	......	176.48	171.73
11.....	174.74	*a*	172.84	*a*	*a*	*a*	......	......	......	......	175.58	171.68
12.....	174.44	*a*	173.04	*a*	*a*	*a*	......	......	......	......	173.28	171.58
13.....	174.14	*a*	174.34	*a*	*a*	*a*	......	......	......	......	173.18	171.58
14.....	174.04	*a*	176.14	*a*	*a*	*a*	......	......	......	......	173.08	171.38
15.....	174.24	*a*	175.04	*a*	*a*	*a*	......	......	......	......	173.08	171.28
16.....	174.84	*a*	174.74	*a*	*a*	*a*	......	......	......	......	173.28	*a*
17.....	175.84	*a*	174.54	*a*	*a*	*a*	......	......	......	......	173.28	*a*
18.....	176.14	*a*	174.34	*a*	*a*	*a*	......	......	......	......	173.18	*a*
19.....	176.04	*a*	174.34	*a*	*a*	*a*	......	......	......	......	172.98	*a*
20.....	175.64	*a*	174.34	*a*	*a*	*a*	......	......	......	......	172.88	*a*
21.....	175.24	*a*	174.34	*a*	*a*	*a*	......	......	......	......	172.68	*a*
22.....	174.44	*a*	175.34	*a*	*a*	*a*	......	......	......	......	172.38	*a*
23.....	174.14	*a*	175.24	*a*	171.28	*a*	......	......	......	......	172.28	*a*
24.....	173.84	*a*	174.54	171.58	172.23	*a*	......	......	......	......	172.08	*a*
25.....	173.74	*a*	175.39	171.48	172.28	*a*	......	......	......	......	171.88	*a*
26.....	173.44	*a*	178.24	171.38	171.98	*a*	......	......	......	......	171.73	*a*
27.....	173.24	*a*	*a*	171.48	172.13	*a*	......	......	......	......	171.63	*a*
28.....	172.64	*a*	*a*	171.83	172.38	*a*	......	......	......	......	171.58	*a*
29.....	172.34	......	*a*	172.33	172.18	*a*	......	......	......	......	171.58	*a*
30.....	172.04	......	*a*	172.23	172.03	*a*	......	......	......	......	171.58	*a*
31.....	171.94	......	*a*	......	171.88	......	......	......	......	......	......	*a*

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Aqueduct at Rexford, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	211.41	210.76	210.56	212.46	210.21	*a*	211.36	211.26	211.28	211.28	211.58	211.98
2.....	211.91	210.76	210.56	212.21	210.11	*a*	211.36	211.26	211.28	211.28	211.58	211.88
3.....	212.56	210.76	210.46	211.91	210.06	*a*	211.36	211.06	211.28	211.48	211.58	211.88
4.....	213.46	210.76	210.56	211.66	210.06	*a*	211.36	211.06	211.28	211.38	211.58	211.88
5.....	212.86	210.76	210.56	211.56	209.96	*a*	211.36	211.01	211.28	211.38	211.58	211.88
6.....	212.26	210.76	210.56	211.46	209.96	*a*	211.36	*a*	211.28	211.28	211.58	211.78
7.....	212.01	210.76	210.56	211.61	209.86	*a*	211.36	*a*	211.28	211.28	211.78	211.68
8.....	212.66	210.76	210.66	211.56	209.76	209.56	211.36	*a*	211.28	211.28	211.78	211.68
9.....	213.86	210.76	210.71	211.46	209.66	209.86	211.36	*a*	211.28	211.28	211.78	211.58
10.....	213.41	210.76	210.81	211.51	209.61	211.31	211.36	*a*	211.28	211.28	215.88	211.58
11.....	212.96	210.76	211.16	212.06	209.56	211.56	211.36	*a*	211.28	211.28	214.08	211.58
12.....	213.21	210.76	211.16	212.66	209.46	211.56	211.36	*a*	211.28	211.28	212.38	211.58
13.....	213.01	210.76	211.31	212.21	209.36	211.46	211.36	*a*	211.28	211.28	212.23	211.58
14.....	212.46	210.76	211.86	211.81	209.26	211.41	211.36	*a*	211.28	211.28	212.18	211.58
15.....	212.31	210.76	213.06	211.36	209.16	211.46	211.36	211.38	211.28	211.33	212.13	211.58
16.....	212.81	210.76	213.51	211.21	209.16	211.36	211.36	211.38	211.28	211.38	212.08	211.58
17.....	213.06	210.76	212.41	211.16	209.16	211.36	211.36	211.28	211.28	211.38	212.08	211.58
18.....	213.46	210.76	211.56	211.16	209.26	211.41	211.36	211.28	211.28	211.38	212.08	211.58
19.....	214.01	210.76	211.21	211.06	209.26	211.36	211.36	211.28	211.28	211.38	212.08	211.58
20.....	212.71	210.76	211.06	211.06	209.36	211.36	211.36	211.28	211.28	211.43	212.23	211.58
21.....	212.51	210.76	211.26	211.06	209.36	211.36	211.36	211.28	211.38	211.48	212.38	211.58
22.....	212.11	210.76	211.16	210.96	209.46	211.36	211.36	211.28	211.38	211.48	212.38	211.58
23.....	211.86	210.76	211.26	210.51	209.51	211.36	211.36	211.28	211.33	211.48	212.38	211.58
24.....	211.51	210.76	211.91	210.16	210.71	211.36	211.36	211.28	211.28	211.53	212.38	211.58
25.....	211.26	210.76	213.41	210.06	210.51	211.36	211.36	211.28	211.28	211.78	212.28	211.58
26.....	211.16	210.76	216.26	209.96	210.36	211.36	211.36	211.28	211.23	211.78	212.18	211.58
27.....	211.06	210.76	......	209.91	210.31	211.36	211.36	211.28	211.23	211.68	212.08	211.58
28.....	210.96	210.96	......	209.91	210.26	211.36	211.36	211.28	211.23	211.68	211.98	211.58
29.....	210.96	......	216.31	210.01	210.26	211.36	211.36	211.28	211.23	211.68	211.98	211.58
30.....	210.86	......	215.21	210.41	210.16	211.36	211.36	211.28	211.23	211.68	211.98	211.58
31.....	210.86	......	212.96	......	210.16	......	211.36	211.28	......	211.63	......	211.58

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Schenectady, N. Y.

DAY.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	213.36	211.21	211.36	214.26	211.46	211.01	211.56	211.36	211.36	211.46	211.66	211.86
2	213.31	211.21	210.76	213.51	210.96	210.66	211.46	211.46	211.36	211.46	211.66	212.16
3	212.86	210.81	210.86	212.51	210.21	210.56	211.46	211.36	211.36	211.51	211.61	212.21
4	212.91	210.66	210.46	212.11	210.06	210.21	211.36	211.36	211.36	211.51	211.56	211.91
5	213.46	210.91	210.16	212.36	209.96	209.91	211.36	211.46	211.36	211.56	211.56	211.76
6	213.16	210.56	210.16	212.81	209.71	209.81	211.41	211.46	211.36	211.56	211.66	211.76
7	214.56	210.21	210.16	212.46	209.91	209.71	211.36	211.51	211.36	211.56	211.66	212.91
8	215.51	210.16	210.16	212.06	209.76	209.41	211.36	211.36	211.36	211.56	211.66	212.41
9	215.41	210.16	210.16	211.26	209.91	209.51	211.36	211.36	211.36	211.56	212.21	213.16
10	214.46	210.16	212.06	211.91	209.81	210.06	211.46	211.36	211.36	211.56	219.04	212.31
11	213.46	210.16	212.06	211.66	209.56	211.66	211.36	211.36	211.36	211.46	215.96	212.26
12	213.61	210.16	212.71	213.91	209.46	211.61	211.36	211.36	211.36	211.46	213.26	211.91
13	213.91	210.16	212.51	213.41	209.26	211.46	211.36	211.36	311.36	211.41	212.66	212.01
14	212.66	210.16	213.51	212.71	209.31	211.46	211.46	211.36	211.41	211.36	212.61	212.06
15	210.91	210.16	216.06	211.91	209.31	211.46	211.36	211.36	211.46	211.36	212.56	212.06
16	210.96	210.16	216.41	211.61	209.41	211.41	211.36	211.36	211.56	211.36	212.46	212.16
17	212.56	210.16	214.51	211.31	209.26	211.51	211.36	211.36	211.36	211.46	212.26	212.26
18	216.11	210.16	214.16	211.01	209.26	211.41	211.56	211.36	211.36	211.36	211.96	211.96
19	216.81	210.16	211.91	210.76	209.26	211.56	211.36	211.46	211.36	211.36	211.91	211.66
20	215.16	210.16	212.21	210.96	209.21	211.56	211.36	211.46	211.36	211.46	212.51	211.66
21	214.51	210.26	213.56	211.01	209.21	211.46	211.36	211.41	211.36	211.46	213.26	211.66
22	214.01	210.61	214.91	210.81	209.16	211.51	211.36	211.36	211.41	211.56	212.91	211.66
23	213.66	211.16	214.06	210.51	209.46	211.46	211.36	211.36	211.61	212.36	213.16	211.66
24	213.26	211.16	213.91	210.46	210.96	211.36	211.36	211.36	211.96	211.86	212.31	211.66
25	212.91	211.16	214.11	210.46	211.06	211.41	211.36	211.36	211.51	211.91	212.06	211.61
26	212.51	211.16	221.01	210.46	210.91	211.56	211.51	211.36	211.36	212.01	212.26	211.46
27	212.16	211.16	225.66	210.26	210.41	211.46	211.41	211.36	211.46	212.76	212.06	211.46
28	211.91	210.76	227.76	210.36	210.61	211.41	211.36	211.36	211.46	212.61	211.91	211.46
29	211.31	.....	220.96	210.46	214.51	211.56	211.46	211.36	211.36	212.11	211.81	211.46
30	211.06	.....	215.66	211.31	213.26	211.61	211.36	211.36	211.41	212.01	211.71	211.46
31	210.91	.....	214.06	.....	211.06	.....	211.36	211.36	......	211.91	......	211.66

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Tribes Hill, N. Y.

DAY.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	270.71	270.01	270.66	272.81	269.96	270.71	267.86	267.76	267.61	267.71	270.11	268.91
2	270.96	269.76	270.11	272.01	269.76	270.61	267.86	267.71	267.61	267.71	270.11	268.81
3	271.51	269.31	269.71	271.36	269.66	269.51	267.86	267.91	267.51	268.11	270.21	268.81
4	273.21	269.31	269.31	271.01	269.76	268.81	267.71	267.91	267.51	268.61	270.21	268.71
5	272.26	269.36	268.91	271.21	269.41	268.71	267.81	267.91	267.41	268.71	270.21	268.71
6	272.41	269.31	268.71	271.11	269.16	268.51	267.91	267.81	267.41	268.71	270.21	268.71
7	272.86	269.31	268.51	271.91	268.96	268.71	267.86	267.81	267.41	268.61	270.41	268.71
8	273.86	269.31	268.41	270.71	268.76	268.71	267.76	267.81	267.41	268.61	270.61	268.71
9	273.01	269.11	268.61	270.51	268.61	268.51	267.61	267.71	267.41	268.51	275.71	268.51
10	272.01	269.11	270.66	270.61	268.31	268.31	267.56	267.71	267.31	268.31	274.71	268.21
11	272.56	269.01	271.21	271.11	268.31	268.11	267.51	267.61	267.31	268.01	274.51	268.21
12	272.61	268.91	271.31	271.51	268.31	267.91	267.66	267.56	267.31	268.31	273.71	268.31
13	271.41	268.91	271.31	271.81	268.31	267.81	267.56	267.51	267.21	268.21	273.61	268.61
14	270.81	268.71	272.06	271.71	268.41	267.71	267.51	267.41	267.21	268.11	271.91	268.51
15	270.51	268.71	273.76	271.66	268.31	267.11	267.46	267.41	267.21	268.11	269.91	268.61
16	270.26	268.71	273.66	270.71	268.21	267.81	267.41	267.61	267.31	268.01	269.91	269.41
17	270.91	268.71	272.46	270.41	268.21	268.31	267.51	267.71	267.31	268.01	269.91	269.61
18	273.51	268.71	271.11	270.16	268.21	267.11	267.71	267.61	267.41	267.71	269.81	269.61
19	273.51	268.71	270.71	270.11	268.11	267.11	267.76	267.61	267.41	267.71	270.01	269.41
20	272.91	268.85	271.11	270.51	268.06	268.11	267.71	267.51	267.31	267.81	270.01	268.71
21	273.21	269.01	272.06	270.16	268.06	269.26	267.71	267.51	267.61	268.81	270.51	268.51
22	272.51	269.06	272.91	270.11	268.21	267.61	267.71	267.41	267.61	269.01	270.61	268.51
23	271.91	270.01	271.96	269.86	268.76	266.61	267.61	267.41	267.91	270.51	270.41	268.31
24	271.71	270.11	271.46	269.96	271.01	267.31	267.61	267.41	268.01	270.46	270.31	268.31
25	271.41	270.01	272.56	269.91	270.41	267.66	267.56	267.41	268.11	269.71	269.71	267.91
26	270.81	270.01	276.51	269.51	270.51	267.21	267.51	267.51	268.11	269.91	269.71	268.21
27	270.71	270.01	279.26	269.31	270.41	268.11	267.61	267.51	267.91	270.51	269.91	268.41
28	270.61	270.01	278.71	269.31	270.31	268.36	267.71	267.61	267.71	270.51	269.71	268.61
29	270.21	......	275.46	269.36	271.06	268.26	267.71	267.71	267.71	270.41	269.11	268.61
30	269.71	......	273.11	270.06	271.21	268.21	267.71	267.71	267.61	270.41	268.91	268.61
31	270.21	......	272.51	......	270.71	......	267.71	267.61	......	270.41	......	268.61

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Schoharie Creek at Fort Hunter, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	282.65	282.00	282.00	282.85	282.55	282.00	280.40	278.85	278.45	279.80	281.70	282.15
2.....	282.45	281.90	282.15	282.65	282.35	281.90	280.10	278.90	278.50	280.05	281.65	282.25
3.....	282.40	281.85	281.95	282.50	282.15	281.90	280.05	278.90	278.50	280.75	281.60	282.10
4.....	283.90	281.80	281.75	282.40	282.00	281.80	279.35	278.90	278.60	281.75	281.50	282.00
5.....	283.10	281.70	281.55	282.45	282.00	281.80	279.65	278.80	279.00	281.65	281.40	282.00
6.....	282.80	281.70	281.25	282.40	281.90	281.70	279.35	278.80	278.65	281.50	281.25	281.95
7.....	283.85	281.60	281.10	282.30	281.90	281.60	279.35	278.65	278.60	281.35	281.05	282.05
8.....	285.80	281.60	281.60	282.20	281.80	281.60	279.20	278.45	278.60	280.95	280.95	282.60
9.....	284.40	281.50	281.10	282.10	281.80	281.60	279.10	278.30	278.60	280.85	283.40	282.25
10.....	283.50	281.45	281.90	282.10	281.70	281.60	279.25	278.30	278.60	280.75	286.35	282.10
11.....	282.60	281.40	282.35	282.60	281.70	281.50	279.20	279.60	278.50	280.55	285.05	282.00
12.....	282.70	281.35	282.10	282.95	281.70	281.50	279.10	278.95	278.50	280.35	283.30	282.00
13.....	282.55	281.30	281.90	282.80	281.60	281.40	279.10	278.80	278.50	280.30	282.75	281.90
14.....	282.45	281.25	282.10	282.70	281.60	281.30	279.20	278.65	278.50	280.35	282.40	281.90
15.....	282.85	281.20	284.20	282.55	281.60	281.05	279.10	278.50	278.50	281.10	282.30	282.00
16.....	282.25	281.20	283.65	282.40	281.50	280.85	278.95	278.40	278.40	281.55	282.25	281.90
17.....	282.30	281.10	283.10	282.30	281.50	280.65	278.75	278.50	278.40	280.90	282.20	282.00
18.....	283.45	281.10	282.75	282.20	281.50	280.45	278.60	278.45	278.30	280.55	282.10	281.90
19.....	283.15	281.05	282.35	282.10	281.50	280.40	278.50	278.40	278.55	280.20	281.95	281.80
20.....	282.80	281.00	282.10	282.10	281.40	280.30	278.90	278.40	278.45	280.40	282.05	281.80
21.....	282.85	281.05	282.80	282.00	281.40	280.35	279.90	278.30	278.35	283.20	281.95	281.80
22.....	282.80	281.25	282.65	282.00	281.40	280.45	279.05	278.30	278.90	282.25	281.85	281.70
23.....	282.70	281.25	282.55	282.00	281.35	280.55	278.40	278.55	280.10	282.05	282.05	281.70
24.....	282.55	281.15	283.00	281.90	282.15	280.80	278.15	278.65	281.90	281.75	282.00	281.70
25.....	282.45	281.10	284.45	281.90	282.25	280.55	278.95	278.60	281.65	281.50	282.00	281.60
26.....	282.85	281.00	285.50	281.90	282.20	280.55	278.65	278.65	280.90	282.15	281.90	281.60
27.....	282.30	281.05	287.30	281.80	282.05	281.20	278.60	278.65	280.05	282.75	281.90	281.50
28.....	282.25	281.30	285.80	281.80	281.90	281.45	278.90	278.40	279.95	282.65	281.80	281.40
29.....	282.20	......	283.95	282.85	282.00	281.05	280.15	278.10	279.90	282.25	281.80	281.40
30.....	282.10	......	283.25	282.85	282.00	280.15	279.65	278.00	279.80	282.00	281.95	281.30
31.....	282.00	......	283.05	......	281.90	......	278.40	278.05	......	281.85	......	281.30

Mean Daily Elevation of Water-surface (U. S. G. S. Datum) of Schoharie Creek near Central Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	569.81	568.86	573.06	570.96	569.06	568.71	567.11	566.58	566.41	566.84	568.24	568.16
2.....	569.11	568.31	571.66	570.31	568.84	568.58	567.11	566.58	566.41	566.88	568.14	568.16
3.....	570.56	568.28	571.21	569.91	568.61	568.51	567.08	566.56	566.38	568.26	568.04	568.16
4.....	572.56	568.41	570.76	569.74	568.51	568.34	567.06	566.56	566.46	567.74	567.91	568.11
5.....	570.36	568.61	570.13	569.91	568.38	568.21	567.06	566.56	566.41	567.84	567.84	568.11
6.....	569.91	568.71	569.41	569.71	568.24	568.14	567.01	566.71	566.41	567.74	567.78	568.11
7.....	570.76	568.88	569.46	569.58	568.11	568.06	566.96	566.88	566.41	567.61	567.71	568.28
8.....	575.06	569.01	569.86	569.41	567.98	567.94	566.96	566.96	566.41	567.44	567.58	569.11
9.....	572.26	569.28	570.16	569.11	567.88	567.86	566.96	566.94	566.36	567.28	574.04	568.56
10.....	570.31	569.38	573.91	568.91	567.86	567.84	566.94	566.88	566.36	567.18	577.61	568.34
11.....	570.36	569.44	570.66	569.91	567.81	567.78	566.91	566.64	566.36	567.08	571.76	568.28
12.....	571.51	569.34	569.46	570.54	567.81	567.74	566.91	566.56	566.36	566.98	570.21	568.26
13.....	571.11	569.26	569.04	569.96	567.78	567.64	566.88	566.54	566.36	566.96	569.76	568.21
14.....	569.86	569.18	570.81	569.71	567.76	567.54	566.86	566.51	566.34	566.96	569.58	568.18
15.....	569.76	569.16	571.86	569.51	567.71	567.46	566.81	566.48	566.31	566.94	569.44	568.16
16.....	569.56	569.14	571.11	569.34	567.68	567.34	566.81	566.46	566.31	566.91	569.34	568.11
17.....	571.71	569.08	569.66	569.21	567.64	567.24	566.78	566.46	566.34	566.84	569.24	568.06
18.....	570.51	569.01	569.36	568.94	567.58	567.14	566.76	566.46	566.36	566.78	569.16	568.01
19.....	569.96	568.86	569.36	568.74	567.56	567.08	566.71	566.56	566.36	566.78	569.11	567.94
20.....	569.51	568.76	569.56	568.54	567.54	567.06	566.71	567.06	566.41	567.31	569.01	567.86
21.....	569.36	568.91	570.11	568.48	567.51	567.24	566.71	566.88	566.51	570.01	568.81	567.84
22.....	569.36	569.16	570.21	568.44	567.48	567.18	566.71	566.64	567.96	568.81	568.71	567.81
23.....	569.41	569.26	569.96	568.41	568.01	567.11	566.68	566.56	569.06	568.26	568.56	567.81
24.....	570.11	570.21	570.01	568.36	569.81	567.11	566.66	566.51	568.31	567.91	568.38	567.86
25.....	569.56	569.71	570.26	568.34	569.36	567.08	566.66	566.48	567.51	567.86	568.26	567.94
26.....	569.31	569.41	574.01	568.31	568.71	567.06	566.64	566.46	567.31	569.61	568.24	568.11
27.....	569.24	569.31	581.46	568.26	568.51	567.01	566.64	566.61	567.14	570.66	568.21	568.26
28.....	569.06	572.96	577.26	568.66	568.51	567.41	566.61	566.48	567.04	569.44	568.21	568.11
29.....	568.84	......	572.41	571.36	570.76	567.36	566.61	566.44	566.88	568.86	568.21	568.04
30.....	568.76	......	571.38	569.96	569.61	567.14	566.61	566.41	566.86	568.64	568.16	567.88
31.....	568.74	......	571.11	......	569.11	......	566.61	566.41	......	568.41	......	567.81

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Fultonville Bridge, Fonda, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	275.94	277.19	277.94	280.19	275.74	279.19	278.49	278.19	277.19	278.19	275.69	277.19
2.....	278.09	277.39	277.74	279.64	275.54	277.64	278.39	278.19	277.04	278.19	275.69	277.54
3.....	277.44	278.44	277.49	279.29	275.34	277.19	278.39	278.19	276.74	278.19	275.69	277.19
4.....	277.14	278.69	277.09	278.64	275.14	277.04	278.39	278.19	276.69	279.09	275.69	276.64
5.....	279.74	278.69	276.54	278.44	274.94	276.89	278.29	278.19	276.69	278.94	275.69	277.14
6.....	279.44	278.69	275.99	278.04	274.74	276.44	278.19	278.19	276.69	278.59	275.69	277.89
7.....	280.64	278.69	275.69	277.39	274.54	276.24	278.09	278.19	276.69	278.24	275.69	276.94
8.....	280.69	278.69	278.94	277.04	274.34	276.19	278.09	278.04	276.69	278.04	275.69	276.64
9.....	280.69	278.69	279.19	276.94	274.14	276.19	277.99	277.79	276.69	277.99	275.69	276.69
10.....	280.29	278.69	279.44	276.79	274.09	276.19	277.89	277.54	276.69	277.89	285.54	276.69
11.....	279.29	278.69	279.79	278.74	274.09	276.19	277.79	277.49	276.44	277.89	280.09	276.69
12.....	278.89	278.49	280.14	280.49	273.99	276.19	277.59	277.49	275.89	277.84	277.49	276.69
13.....	278.49	278.39	280.19	279.29	273.89	276.19	277.19	277.49	275.89	277.69	276.89	276.69
14.....	278.39	278.29	281.54	277.99	273.89	276.39	276.94	277.49	275.29	277.69	276.39	276.69
15.....	277.89	278.19	283.94	277.44	273.89	277.09	276.69	277.49	275.09	277.69	275.84	276.29
16.....	277.14	278.09	282.64	277.09	273.89	277.19	276.69	277.49	274.84	277.69	275.04	274.74
17.....	278.04	277.99	281.04	276.79	273.84	277.49	276.69	277.49	274.69	277.69	275.34	274.14
18.....	280.69	277.89	278.19	276.34	273.69	277.69	276.69	277.49	274.59	277.69	275.39	273.79
19.....	280.69	277.69	277.54	276.19	273.39	277.44	276.69	277.49	274.39	279.19	275.44	273.64
20.....	280.69	277.69	277.44	276.19	273.44	277.59	276.69	277.49	274.19	281.69	278.89	273.34
21.....	280.69	277.69	278.39	276.19	273.49	277.74	276.69	277.39	274.19	279.69	281.29	273.19
22.....	280.44	277.69	280.19	276.09	273.59	277.84	276.69	277.39	276.79	278.69	277.34	273.19
23.....	279.79	277.69	280.69	276.09	273.69	277.89	276.69	277.39	278.59	278.69	276.99	273.19
24.....	279.29	277.89	280.69	276.09	275.79	277.99	276.59	277.39	279.24	277.54	276.99	273.19
25.....	278.89	277.89	280.99	275.99	277.39	278.09	276.49	277.39	278.79	276.99	276.99	273.19
26.....	278.34	277.99	281.64	275.99	276.44	278.29	276.49	277.39	278.39	276.69	277.19	273.19
27.....	277.59	278.09	289.19	275.99	275.44	278.49	276.59	277.39	277.99	278.69	277.19	273.19
28.....	277.34	278.09	289.69	275.89	276.59	278.49	276.99	277.39	278.14	279.74	277.19	273.19
29.....	277.14	......	285.19	275.89	277.09	278.49	277.14	277.39	278.19	278.84	277.19	273.19
30.....	276.99	......	281.19	275.89	277.19	278.49	277.89	277.39	278.34	276.44	276.59	273.19
31.....	276.69	......	280.09	......	280.69	......	278.19	277.39	......	275.69	......	273.19

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Canajoharie, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	283.70	282.50	283.55	291.55	283.26	283.80	281.47	*a*	276.47	284.72	285.07	284.92
2.....	282.85	281.95	282.25	293.64	283.22	283.68	281.64	*a*	276.47	285.62	284.97	285.02
3.....	283.15	282.15	281.75	291.55	283.30	283.68	281.59	*a*	276.62	286.17	285.17	284.92
4.....	286.50	282.65	281.45	289.88	283.18	283.26	281.55	*a*	276.52	285.97	285.02	285.17
5.....	285.80	283.35	281.10	288.64	283.14	283.01	281.51	278.02	276.42	285.92	285.27	285.42
6.....	285.60	285.75	280.75	288.34	283.09	283.05	281.59	277.92	279.27	285.87	285.17	286.27
7.....	288.40	285.75	280.75	287.68	283.14	282.97	281.64	277.92	279.27	285.67	285.12	285.47
8.....	290.10	285.50	280.65	287.30	282.72	282.84	281.43	277.82	280.37	285.72	285.02	285.77
9.....	289.60	285.25	283.10	286.68	282.72	282.64	280.88	277.92	280.42	285.57	285.82	285.82
10.....	287.30	285.15	288.00	286.47	282.68	282.51	281.30	277.87	280.62	285.57	290.72	285.37
11.....	286.05	284.90	288.30	289.72	282.68	282.64	281.51	278.02	280.92	285.42	287.82	285.22
12.....	286.95	284.55	288.70	289.72	282.68	282.43	281.59	278.02	281.62	285.47	286.22	285.07
13.....	286.20	284.30	288.15	290.26	282.68	282.26	281.55	277.92	281.67	285.67	286.07	283.72
14.....	285.10	283.95	288.85	289.72	282.59	282.59	281.80	278.02	281.77	285.32	286.02	282.12
15.....	284.10	284.15	*a*	288.64	282.64	282.55	281.88	278.02	281.92	285.22	286.37	280.22
16.....	283.20	283.95	*a*	287.64	282.22	282.34	281.64	278.07	282.07	275.27	286.12	280.27
17.....	286.35	283.65	*a*	286.64	281.72	282.43	281.18	277.92	282.12	285.42	286.02	280.27
18.....	289.55	283.25	*a*	284.55	281.84	281.84	280.80	277.77	282.17	285.57	285.77	279.57
19.....	290.60	282.95	*a*	284.55	282.88	281.88	281.30	277.62	282.32	285.72	285.92	279.62
20.....	288.35	283.10	*a*	284.64	281.80	281.84	281.14	277.12	282.32	286.22	286.37	279.92
21.....	288.75	283.85	*a*	284.68	281.76	281.68	281.43	276.82	282.92	287.12	287.67	279.72
22.....	287.90	283.90	*a*	284.51	281.55	281.64	281.01	276.57	283.02	287.17	286.72	279.82
23.....	285.55	285.00	*a*	284.47	283.09	281.55	281.05	276.52	283.22	286.22	287.57	279.97
24.....	285.45	284.35	*a*	284.34	284.09	281.64	281.01	276.52	285.67	286.17	286.42	279.92
25.....	285.55	283.70	292.18	284.51	283.76	281.51	281.22	276.62	285.62	286.32	286.02	279.82
26.....	285.15	282.60	301.76	284.51	283.64	281.64	281.14	276.62	285.12	286.22	285.87	279.92
27.....	284.15	282.20	302.76	284.38	283.26	281.51	281.09	276.42	284.67	286.12	285.52	279.87
28.....	283.25	284.25	299.72	284.01	283.14	281.59	281.18	276.42	284.62	385.87	285.37	280.12
29.....	282.25	......	297.26	283.47	285.68	281.47	281.14	276.67	284.47	285.87	285.42	280.17
30.....	281.95	......	296.26	283.64	286.26	281.51	281.01	276.47	284.32	285.32	284.97	280.42
31.....	281.95	......	294.22	......	286.34	......	281.09	276.57	......	285.42	......	280.57

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Fort Plain, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	295.56	293.96	294.11	297.61	293.76	294.31	291.96	292.71	292.36	293.06	294.16	294.41
2.....	295.06	293.46	293.71	296.91	293.46	294.06	291.91	292.66	292.36	293.06	294.16	294.66
3.....	295.36	293.56	293.36	296.11	293.06	293.31	291.76	292.46	292.31	293.76	294.11	294.31
4.....	296.36	293.76	293.11	295.56	293.01	293.01	291.66	292.66	292.26	294.66	294.01	294.11
5.....	296.76	294.06	292.96	296.71	292.86	292.66	291.66	292.61	292.16	294.06	293.96	294.16
6.....	296.31	294.16	292.91	296.61	292.96	292.36	291.46	292.36	292.16	293.26	294.16	294.16
7.....	296.31	294.56	292.66	296.06	292.81	292.06	291.36	292.56	292.21	293.26	294.16	294.21
8.....	296.96	294.56	292.36	295.26	292.81	292.16	291.21	292.86	292.16	293.46	294.16	294.41
9.....	298.26	294.26	292.76	294.36	292.81	292.11	291.21	292.66	292.16	293.11	295.31	294.76
10.....	298.61	294.16	296.06	294.71	292.66	291.91	291.26	292.36	292.21	293.16	298.26	294.56
11.....	298.06	294.11	296.76	297.81	292.36	291.96	291.26	292.16	293.16	293.11	297.86	294.16
12.....	296.71	294.06	296.96	297.91	291.91	291.81	291.36	292.21	292.86	293.06	295.96	293.96
13.....	297.01	294.11	297.31	296.96	291.66	291.46	292.36	292.06	292.86	293.06	295.56	292.11
14.....	296.61	294.06	298.26	295.76	291.66	291.46	292.26	291.86	292.66	293.16	295.16	291.66
15.....	296.06	294.06	298.56	295.11	291.56	291.26	292.36	291.86	292.66	293.26	295.06	291.26
16.....	295.26	294.06	299.61	294.71	291.51	291.36	292.46	291.86	292.66	293.21	294.91	290.96
17.....	297.51	293.96	298.01	294.36	291.56	291.56	292.46	291.81	292.81	293.16	294.16	289.66
18.....	299.31	293.86	296.21	294.16	291.46	292.66	292.66	291.91	293.06	293.11	294.11	289.66
19.....	299.96	293.76	295.56	294.21	291.41	292.76	292.66	291.96	293.36	293.06	294.01	289.36
20.....	298.86	293.91	296.26	294.21	291.46	293.41	292.46	291.96	293.86	293.61	294.96	289.16
21.....	297.91	294.21	297.41	294.56	291.46	292.66	292.36	291.86	293.76	294.96	294.96	289.11
22.....	297.36	294.51	299.01	294.21	291.66	292.46	292.36	292.01	294.56	295.81	294.96	288.96
23.....	297.11	295.16	298.56	294.11	293.96	292.66	292.56	291.86	294.26	295.16	295.11	288 96
24.....	296.81	295.16	298.11	293.71	295.76	292.56	293.16	291.76	293.96	294.96	295.06	288.96
25.....	296.56	294.31	298.76	293.86	294.96	292.26	293.11	291.76	293.86	294.96	294.11	288.96
26.....	296.06	293.76	299.31	294.71	294.56	292.26	293.11	291.86	293.61	294.96	294.06	288 96
27.....	295.56	293.56	......	293.56	294.16	292.16	293.06	292.06	294.11	294.96	294 01	288.96
28.....	295.11	294.31	......	293.46	296.31	292.21	293.01	292.06	293 56	294.86	294.16	288 96
29.....	294.76	......	300.66	294.26	298.11	292.21	293.01	292.31	294.06	294.56	294.16	289.06
30.....	294.36	......	298.51	294.01	296.41	292.06	292.71	292.46	294.06	294.26	294.21	289.06
31.....	294.16	......	297.56	......	295.26	......	292.56	292.41	......	294.16	......	289.06

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at St. Johnsville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	......	299.10	300.75	302.85	301.75	301.55	301.90	*a*	301.25	294.25	295.55	296.80
2.....	......	*a*	*a*	302.21	301.66	301.55	301.50	*a*	300.75	293.85	295.20	297.20
3.....	......	297.82	299.18	300.88	301.22	301.50	301.00	*a*	300.20	295.40	295.30	296 55
4.....	......	298.18	299.65	300.64	301.00	301.75	*a*	*a*	299.45	296.50	295.20	296.25
5.....	......	297.86	299.80	301.69	301.70	302.35	300.80	*a*	298.85	295.25	295.30	296.15
6.....	......	297.22	299.95	302.45	301.76	301.75	*a*	*a*	297.80	294.35	295.90	296.35
7.....	......	297.49	298.80	301.40	302.20	301.90	298.40	*a*	295.45	294.25	295.10	296.45
8.....	......	297.65	298.65	300.82	302.70	302.40	298.40	*a*	293.40	294.25	295.40	299.55
9.....	......	300.50	*a*	300.65	302.20	302.40	298.40	*a*	293.20	294.05	300.85	298.90
10.....	......	300.48	301.62	301.98	301.85	302.30	298.85	*a*	293.50	294.20	306.85	297.95
11.....	......	300.17	301.92	304.75	*a*	301.80	299.90	*a*	293.50	293.95	304.80	297.10
12.....	......	300.05	302.95	303.68	300.90	301.10	301.40	*a*	293.40	294.00	303.05	296.70
13.....	......	300.25	303.86	302.60	301.50	301.90	*a*	*a*	293.30	293.80	300.65	296.25
14.....	......	300.18	306.57	302.10	301.90	301.45	302.00	*a*	293.10	293.85	300.20	296.40
15.....	......	300.19	305.80	301.92	302.00	301.30	301.95	*a*	293.15	293.90	300.20	296.50
16.....	......	300.23	*a*	301.60	302.15	301.10	302.00	*a*	293.10	293.70	299.60	295.90
17.....	......	299.98	303.55	301.88	302.15	301.15	302.00	*a*	293.25	293.70	298.25	295 85
18.....	......	300.00	300.50	300.96	301.55	301.25	302.00	*a*	293.15	293.60	297.40	295.95
19.....	......	300.38	300.05	301.82	301.50	391.95	302.00	*a*	293.65	293.90	297.20	295.80
20.....	......	300.90	300.88	301.70	301.75	301.50	*a*	*a*	294.25	295.00	301.85	295.30
21.....	......	300.98	302.66	301.98	301.90	299.20	*a*	*a*	293.95	299.70	304.20	295.20
22.....	......	300.66	305.40	301.19	302.05	300.90	301.30	*a*	295.10	302.95	301.95	295.15
23.....	......	301.60	302.40	301.02	302.50	301.45	301.55	*a*	295.80	299.85	300.25	295.20
24.....	......	301.34	301.80	301.04	303.45	301.65	301.95	*a*	295.10	297.55	299.15	295.25
25.....	......	300.82	305.70	301.78	302.25	302.20	301.95	*a*	294.50	297.45	298.50	295.20
26.....	......	300.52	313.61	301.88	301.50	301.70	302.00	*a*	294.45	300.75	297.10	295.25
27.....	......	300.05	314.10	301.82	301.65	302.60	302.00	*a*	294.50	301.15	296.40	296.20
28.....	......	300.58	312.58	301.65	303.00	302.50	302.00	*a*	294.50	299.45	296.20	295.75
29.....	......	......	307.82	301.60	304.95	302.40	302.10	*a*	294.40	298.00	296.00	295.90
30.....	......	......	304.15	301.55	303.00	302.00	302.10	*a*	294.25	297.35	296.25	296.05
31.....	......	......	302.44	......	301.50	......	301.80	*a*	......	295.95	......	295.90

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above State Dam at Little Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	365.16	364.91	364.11	365.51	364.11	364.26	364.31	363.41	363.31	363.31	363.71	264.31
2.....	364.71	364.91	364.11	365.51	364.01	364.21	364.31	363.31	363.01	363.51	363.71	364.31
3.....	365.16	364.51	364.11	365.11	364.01	364.11	364.21	363.31	363.01	363.71	363.71	364.31
4.....	365.71	364.51	364.11	364.76	364.01	364.11	364.11	363.31	363.16	363.71	363.71	364.31
5.....	365.71	364.51	364.11	364.71	363.91	364.01	364.11	363.31	362.51	363.51	363.71	364.31
6.....	365.51	364.51	363.91	365.51	363.81	363.91	364.11	363.31	362.31	363.51	363.71	364.31
7.....	366.41	364.41	363.91	365.06	363.71	363.71	364.11	363.31	363.01	363.51	364.31	364.51
8.....	367.11	364.61	363.81	364.81	363.61	363.71	364.11	363.31	363.11	363.51	364.31	365.11
9.....	366.56	364.41	364.11	364.56	363.61	363.51	364.11	363.31	363.31	363.51	366.21	364.81
10.....	366.06	364.41	364.76	364.51	363.61	363.51	364.21	363.31	363.31	363.51	367.06	364.51
11	365.51	364.41	364.91	365.56	363.61	363.51	364.31	363.31	363.31	363.51	366.06	364.31
12	366.01	364.61	364.11	365.71	363.61	363.51	364.31	363.31	363.31	363.51	365.26	364.11
13.....	365.61	364.61	365.51	365.26	363.51	363.51	364.31	363.31	363.31	363.51	364.71	364.26
14	365.41	364.71	366.01	364.91	363.51	363.51	363.51	363.31	363.31	363.31	364.61	364.31
15.....	365.31	364.71	366.76	364.71	363.51	363.51	363.51	363.31	363.31	363.31	364.61	364.21
16.....	365.01	364.51	367.21	364.56	363.51	363.51	363.51	363.31	363.31	363.31	364.46	364.21
17.....	365.86	364.51	366.11	364.51	363.51	363.51	363.51	363.31	363.31	363.31	364.31	364.21
18	367.26	364.51	364.91	365.36	363.51	363.51	363.51	363.31	363.31	363.31	364.31	364.21
19	367.51	364.51	364.71	365.51	363.51	363.51	363.51	363.11	363.31	363.31	364.16	363.91
20.....	366.71	364.61	364.71	365.01	363.51	363.51	363.81	363.11	363.31	364.06	365.21	363.91
21.....	366.71	364.61	365.51	364.41	363.51	363.51	363.81	362.91	363.31	364.76	365.46	363.91
22.....	366.51	364.61	366.31	364.31	363.51	363.51	363.81	362.91	363.31	364.71	364.91	363.91
23.....	365.71	364.91	365.81	364.31	364.21	363.51	363.66	363.31	363.51	364. 6	364.56	363.91
24.....	365.71	364.61	365.51	364.31	364.61	363.51	363.66	363.31	364.21	364.21	364.31	363.71
25.....	365.76	364.51	367.56	364.21	364.51	363.51	363.91	363.31	364.01	364.31	364.31	363.91
26.....	365.31	364.31	371.01	364.11	363.86	364.26	364.21	363.31	363.71	364.51	364.31	364.11
27.....	365.31	364.01	371.71	364.26	363.71	364.41	364.21	363.31	363.51	364.51	364.31	364.21
28.....	364.91	364.01	370.41	364.11	364.51	364.41	364.21	363.31	363.51	364.26	364.11	363.91
29.....	364.71	......	367.56	364.11	365.56	364.31	363.81	363.31	363.31	364.11	364.11	363.91
30.....	364.71	......	366.06	364.11	364.76	364.31	363.41	363.31	363.31	363.91	364.11	363.91
31.....	364.71	......	365.51	......	364.31	......	363.41	363.31	......	363.71	......	363.91

Mean Daily Elevation of Water-surface (Barge Canal Datum) of West Canada Creek at Kast Bridge N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	444.25	443.78	443.18	446.07	443.48	444.20	442.34	442.51	442.27	442.22	443.36	443.38
2.....	443.89	443.47	443.06	445.27	443.52	443.89	442.38	442.35	441.92	442.61	443.09	443.62
3.....	444.41	443.51	442.95	444.78	443.38	443.66	442.39	442.28	442.02	443.28	443.14	443.40
4.....	445.46	443.48	443.13	444.76	443.20	443.38	442.30	442.32	442.22	443.10	443.14	443.38
5.....	445.06	443.15	442.96	446.08	443.09	443.18	442.13	442.42	441.94	442.79	443.30	443.54
6.....	445.80	443.11	442.92	445.70	443.05	443.06	442.52	442.30	442.04	442.67	443.08	443.40
7.....	445.89	442.96	442.82	444.98	442.88	443.10	442.13	442.13	442.15	442.68	443.12	443.83
8.....	446.64	443.05	442.91	444.40	443.03	442.97	442.59	442.26	441.92	442.29	443.05	445.31
9	446.29	442.99	442.80	444.00	442.94	442.84	442.19	442.37	442.05	442.49	445.24	444.67
10.....	445.26	443.10	443.57	443.85	442.74	442.78	442.51	442.20	442.12	442.39	447.17	444.37
11.....	444.88	443.09	443.64	445.10	442.70	442.74	442.76	442.08	442.01	442.39	446.04	443.86
12.....	445.46	443.12	443.99	445.39	442.71	442.70	442.70	442.24	441.76	442.72	445.00	443.61
13.....	444.96	443.08	444.20	444.91	442.62	442.46	442.60	442.30	441.91	442.62	444.44	443.66
14.....	444.66	443.02	446.18	444.33	442.68	442.54	442.54	442.16	441.91	442.57	444.28	443.60
15.....	444.30	443.05	446.53	444.44	442.48	442.28	442.28	442.03	441.78	442.45	444.28	443.65
16.....	444.13	443.08	447.16	444.16	442.70	442.52	442.27	442.14	442.08	442.30	444.08	443.38
17.....	446.60	443.00	445.98	444.08	442.66	442.64	442.18	441.89	442.04	442.36	443.76	443.44
18.....	446.80	442.94	444.90	443.66	442.69	442.54	442.32	442.02	441.92	442.30	443.58	443.48
19.....	447.00	442.92	444.64	444.24	442.90	442.38	442.26	442.12	442.22	442.43	443.48	443.04
20.....	446.08	442.99	444.66	444.16	442.78	442.52	442.22	442.06	442.22	442.93	445.30	442.90
21.....	446.92	443.14	445.97	443.85	442.69	442.77	442.22	442.04	442.36	445.44	445.64	443.04
22.....	446.46	443.30	447.27	443.68	442.92	442.68	442.26	441.98	442.96	444.81	444.82	443.12
23.....	445.40	444.20	446.10	443.75	444.46	442.62	442.31	442.33	443.40	444.00	444.28	442.98
24.....	445.50	443.76	445.09	443.64	444.84	442.40	442.46	442.48	442.92	443.54	444.04	442.96
25.....	445.04	443.56	448.83	443.76	444.48	442.42	442.64	442.36	442.60	444.10	443.94	443.09
26.....	444.52	443.36	450.42	443.68	443.73	442.36	442.49	442.19	442.46	444.46	443.68	443.12
27.....	444.62	443.17	450.42	443.80	443.94	442.68	442.36	442.32	442.49	444.40	443.49	442.60
28.....	444.03	443.26	449.88	443.52	444.47	442.87	442.38	442.28	442.27	444.05	443.36	442.68
29.....	443.57	......	446.91	443.67	445.30	442.72	442.42	442.57	442.02	443.66	443.36	442.92
30.....	443.54	......	445.56	444.72	445.05	442.40	442.59	442.30	442.29	443.52	443.37	442.90
31.....	443.60	......	446.22	......	444.32	......	442.59	442.24	......	443.38	......	443.02

Mean Daily Elevation of Water-surface (Barge Canal Datum) of West Canada Creek above Morgan Dam, Trenton Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	752.56	751.76	751.06	753.41	750.86	751.21	749.86	749.56	749.56	749.66	750.56	750.66
2.....	752.06	751.86	750.96	752.31	750.76	751.06	749.76	749.56	749.56	749.81	750.56	750.86
3.....	752.11	751.61	750.96	752.11	750.76	750.96	749.66	749.66	749.56	750.11	750.56	750.46
4.....	754.31	751.51	750.96	751.91	750.71	750.96	749.66	749.61	749.56	750.11	750.51	750.66
5.....	753.76	751.26	750.06	753.16	750.61	750.86	749.66	749.56	749.56	749.96	750.46	750.66
6.....	753.51	750.91	751.01	752.61	750.56	750.86	749.66	749.46	749.56	749.91	750.46	750.66
7.....	754.31	750.96	750.91	752.11	750.96	750.81	749.66	749.46	749.56	749.81	750.36	750.66
8.....	755.11	750.91	750.96	751.81	750.61	750.66	749.86	749.51	749.46	749.76	750.36	752.51
9.....	755.11	750.86	750.86	751.36	750.51	750.41	749.86	749.56	749.46	749.66	752.46	752.16
10.....	754.06	750.96	750.86	751.31	750.61	750.26	749.86	749.46	749.46	749.26	754.31	751.76
11.....	753.71	751.06	751.01	751.51	750.56	750.06	749.86	749.46	749.46	749.26	752.96	751.41
12.....	753.51	751.06	751.51	752.16	750.61	750.06	749.86	749.46	749.46	749.26	752.16	750.81
13.....	753.41	750.86	751.71	751.81	750.36	749.96	749.86	749.56	749.46	749.26	751.51	750.76
14.....	753.06	750.96	753.26	751.61	750.16	749.96	749.76	749.46	749.46	749.26	751.36	750.66
15.....	752.76	751.06	754.66	751.56	750.01	749.96	749.76	749.46	749.46	749.26	751.26	750.66
16.....	752.56	750.86	755.76	751.11	749.86	749.96	749.66	749.46	749.46	749.26	751.26	750.66
17.....	752.91	750.96	754.81	751.01	749.86	749.86	749.66	749.26	749.46	749.26	751.01	750.66
18.....	755.16	750.91	753.76	750.86	749.86	749.86	749.66	749.26	749.46	749.26	750.66	750.56
19.....	755.91	750.86	752.86	750 86	749.86	749.86	749.66	749.26	749.46	749.26	750.56	750.46
20.....	754.86	750.86	754.36	751.41	749.86	749.96	749.66	749.26	749.46	749.51	751.71	750.26
21.....	755.61	751.31	755.36	751.36	749.86	749.96	749.66	749.26	749.26	752.71	752.06	750.26
22.....	754.96	751.36	756.76	750.91	750.41	749.86	749.66	749.26	749.86	752.46	751.86	750.26
23.....	754.16	751.46	755.11	750.71	751.86	749.76	749.66	749.76	750.66	752.06	751.46	750.26
24.....	753.91	751.86	754.56	750.66	752.11	749.76	749.66	749.76	750.26	751.36	751.16	750.16
25.....	753.61	751.46	756.41	751.01	751.31	749.76	749.66	749.76	749.96	751.16	751.11	750.06
26.....	753.41	751.36	757.51	750.81	750.96	749.76	749.66	749.66	749.66	751.71	750.81	749.96
27.....	752.71	751.36	757.11	750.76	750.91	749 91	749.66	749.66	749.66	751.61	750.66	750.06
28.....	752.21	751.41	756.36	750.66	751.36	750.01	749.66	749.56	749.66	751.36	750.46	750.06
29.....	751.91	......	753.86	750.76	753.56	750.06	749.66	749.56	749.76	751.16	750.26	749.96
30.....	751.66	......	752.71	750.86	752.31	749.86	749.66	749.56	749.66	750.86	750.26	750.06
31.....	751.56	......	752.41	......	751.36	......	749.66	749.56	.....	750.76	......	750.06

Mean Daily Elevation of Water-surface (Barge Canal Datum) of West Canada Creek above Power Co.'s Dam, Trenton Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1,019.94	1,019.81	1,019.10	1,020.44	1,018.02	1,020.31	1,010.15	1,013.69	1,011.48	1,013.81	1,019.69	1,019.52
2.....	1,019.60	1,019.65	1,019.31	1,019.81	1,018.06	1,020.06	1,016.06	1,015.44	1,016.48	1,017.60	1,019.69	1,019.52
3.....	1,019.69	1,019.56	1,018.36	1,019.19	1,018.06	1,019.81	1,014.40	1,015.00	1,015.02	1,019.69	1,019.44	1,019.36
4.....	1,020.86	1,019.44	1,018.86	1,019.10	1,018.06	1,019.65	1,010.19	1,014.02	1,015.60	1,019.44	1,019.48	1,019.40
5.....	1,021.06	1,019.27	1,018.69	1,020.40	1,017.60	1,019.52	1,018.23	1,012.77	1,016.94	1,019.65	1,019.65	1,019.52
6.....	1,020.90	1,019.19	1,018.36	1,019.98	1,017.52	1,019.44	1,018.98	1,010.90	1,017.60	1,017.02	1,019.48	1,019.48
7.....	1,021.36	1,019.23	1,018.19	1,019.27	1,018.31	1,019.40	1,014.59	1,011.18	1,013.40	1,008.98	1,019.36	1,019.90
8.....	1,021.69	1,019.31	1,018.69	1,018.81	1,017.44	1,019.56	1,009.86	1,017.10	1,016.73	1,017.02	1,019.40	1,020.98
9.....	1,021.65	1,019.73	1,019.73	1,018.60	1,017.27	1,019.27	1,015.65	1,011.73	1,015.65	1,014.40	1,021.02	1,020.36
10.....	1,021.06	1,019.44	1,018.98	1,018.48	1,016.90	1,019.19	1,019.27	1,014.60	1,014.69	1,015.65	1,022.56	1,020.10
11.....	1,020.52	1,019.48	1,019.15	1,018.86	1,017.56	1,019.81	1,019.36	1,015.98	1,015.36	1,015.81	1,021.40	1,019.86
12.....	1,020.77	1,019.44	1,018.90	1,019.60	1,016.48	1,017.86	1,019.19	1,016.94	1,015.02	1,015.94	1,020.65	1,019.52
13.....	1,020.60	1,019.36	1,019.44	1,019.36	1,015.94	1,017.19	1,019.44	1,017.36	1,013.56	1,017.56	1,020.15	1,019.56
14.....	1,019.56	1,019.27	1,020.19	1,018.77	1,015.15	1,017.73	1,014.44	1,015.56	1,015.90	1,015.48	1,020.10	1,019.73
15.....	1,020.10	1,019.56	1,020.98	1,018.86	1,014.56	1,019.23	1,011.52	1,015.27	1,016.19	1,015.48	1,020.15	1,019.44
16.....	1,020.02	1,019.69	1,022.10	1,018.60	1,014.56	1,019.02	1,012.31	1,017.31	1,014.56	1,013.98	1,020.06	1,019.40
17.....	1,020.06	1,019.06	1,020.86	1,018.48	1,018.44	1,017.94	1,012.23	1,016.77	1,014.90	1,014.40	1,019.86	1,019.48
18.....	1,021.86	1,018.36	1,020.19	1,018.15	1,019.27	1,015.65	1,011.44	1,016.36	1,016.48	1,015.86	1,019.60	1,019.44
19.....	1,022.65	1,018.48	1,019.90	1,018.52	1,019.15	1,012.69	1,016.90	1,015.52	1,016.98	1,015.36	1,019.52	1,018.90
20.....	1,021.52	1,018.65	1,020.06	1,018.65	1,018.27	1,016.27	1,016.02	1,013.65	1,018.06	1,019.27	1,020.73	1,018.98
21.....	1,022.40	1,018.73	1,021.10	1,018.31	1,016.81	1,019.31	1,011.31	1,012.81	1,008.65	1,021.23	1,021.15	1,019.48
22.....	1,022.81	1,018.94	1,021.65	1,018.15	1,019.15	1,019.48	1,010.48	1,016.19	1,019.48	1,020.56	1,020.56	1,019.19
23.....	1,020.90	1,019.81	1,021.40	1,018.23	1,020.52	1,015.23	1,010.60	1,018.02	1,019.73	1,019.98	1,020.98	1,017.81
24.....	1,020.94	1,019.69	1,020.23	1,018.02	1,020.81	1,013.73	1,017.52	1,019.19	1,018.23	1,019.77	1,019.98	1,018.98
25.....	1,020.65	1,019.48	1,020.40	1,018.60	1,020.40	1,013.10	1,015.52	1,015.94	1,012.56	1,020.15	1,019.90	1,019.27
26.....	1,020.90	1,019.23	1,025.15	1,018.36	1,019.90	1,014.44	1,016.73	1,014.31	1,016.98	1,020.44	1,019.69	1,019.10
27.....	1,020.19	1,019.02	1,024.81	1,018.44	1,019.94	1,019.31	1,016.56	1,015.56	1,014.06	1,020.40	1,019.60	1,018.81
28.....	1,019.77	1,018.98	1,024.52	1,018.02	1,020.73	1,019.44	1,011.65	1,018.40	1,014.86	1,020.10	1,019.44	1,018.98
29.....	1,019.52	....	1,021.06	1,018.10	1,022.06	1,019.44	1,015.65	1,015.77	1,013.65	1,019.90	1,019.40	1,018.73
30.....	1,019.60	....	1,019.98	1,018.56	1,020.94	1,012.94	1,015.65	1,017.90	1,011.15	1,019.73	1,019.60	1,018.73
31.....	1,019.60	....	1,019.48	....	1,020.23	....	1,012.56	*a*	....	1,019.69	....	1,018.40

a No record.

Mean Daily Gage Height in Feet, of West Canada Creek at Twin Rock Bridge, near Grant, N. Y.

DAY.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	34.19	33.00	32.19	35.44	30.86	32.26	28.68	28.82	31.06	31.23	32.58	33.98
2	33.54	32.88	32.14	33.59	30.62	31.86	28.86	28.86	30.97	31.73	32.67	32.80
3	33.81	32.66	32.04	32.70	30.34	31.28	28.82	28.92	30.92	33.66	32.32	32.64
4	36.12	32.61	32.08	32.52	30.01	30.68	28.86	28.85	30.88	32.74	32.58	32.72
5	35.60	32.37	32.02	35.18	29.69	30.42	28.82	28.72	30.96	32.22	32.62	32.84
6	35.10	32.23	31.95	34.10	29.61	30.15	28.68	29.00	30.93	31.90	32.42	32.72
7	36.72	32.12	31.90	32.76	30.92	30.02	28.88	30.11	30.86	31.59	32.25	33.02
8	37.74	32.19	31.90	31.78	29.43	29.98	28.94	30.36	30.88	31.48	32.14	36.10
9	37.36	32.18	31.92	31.48	29.24	29.78	29.34	30.40	30.81	31.32	34.79	35.35
10	35.72	32.10	32.14	31.30	29.22	29.60	29.72	31.14	30.89	31.24	39.50	34.46
11	35.76	32.13	32.30	32.28	29.22	29.46	29.90	31.22	30.89	31.21	37.04	33.65
12	36.46	32.12	32.47	33.32	29.18	29.28	29.32	31.13	30.78	31.33	35.23	33.15
13	36.39	32.05	32.68	32.57	29.06	29.08	28.94	30.94	30.78	31.48	34.12	33.20
14	35.81	32.03	34.59	31.93	28.94	29.10	28.94	30.90	30.82	31.40	34.08	33.00
15	35.68	32.06	36.53	31.92	28.91	29.14	28.85	30.92	30.84	31.32	34.11	32.60
16	35.58	32.02	39.08	31.66	28.92	29.40	28.63	30.94	30.76	31.28	33.62	32.50
17	36.40	31.93	36.42	31.18	29.06	29.34	28.74	30.90	30.82	31.22	33.22	32.62
18	39.48	31.86	34.83	30.78	29.24	29.00	28.75	30.84	31.12	31.22	32.95	32.49
19	39.09	32.01	34.54	31.53	29.46	28.94	28.67	30.75	31.21	31.31	32.82	31.96
20	37.52	32.05	34.59	31.66	29.29	29.44	28.58	30.76	31.22	31.89	36.18	32.04
21	39.84	32.12	36.70	31.17	29.03	29.63	28.66	30.75	31.08	36.52	36.30	32.17
22	37.63	32.18	39.35	30.83	29.36	29.36	28.90	30.82	32.81	34.34	34.87	32.10
23	35.66	32.92	36.98	30.70	31.95	29.21	28.92	31.50	32.89	33.48	34.04	31.79
24	36.04	33.00	35.09	30.59	33.70	29.09	29.42	31.57	32.58	32.99	33.85	32.00
25	35.28	32.86	39.46	31.63	33.48	28.91	29.20	31.23	31.62	33.94	33.67	32.16
26	34.32	32.44	43.40	30.94	32.54	28.98	28.68	31.09	31.44	34.24	33.06	32.06
27	34.04	32.21	43.14	30.94	31.14	29.66	28.52	31.17	31.19	34.43	32.80	31.72
28	33.18	32.22	41.55	30.81	33.85	29.68	28.75	31.22	31.14	33.76	32.56	31.72
29	33.88	......	36.37	30.78	35.80	29.00	29.18	31.37	31.15	33.26	32.51	31.78
30	32.90	......	34.14	31.07	34.16	29.18	29.06	31.51	31.16	32.94	32.48	31.84
31	32.78	......	33.68	......	32.76	......	28.92	31.24	......	32.98	......	31.84

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Washington St. Bridge, Herkimer, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	375.82	378.40	373.95	374.25	373.40	......	373.75	373.50	374.05	373.55
2	......	......	375.30	377.80	373.55	374.45	373.25	......	373.45	373.85	374.15	373.60
3	......	......	375.20	376.90	373.40	374.20	373.05	......	373.55	373.75	373.95	373.60
4	......	......	375.18	376.25	373.25	373.95	372.90	......	373.05	373.70	374.10	373.55
5	......	......	375.20	376.75	373.85	373.65	372.70	......	372.75	373.60	374.10	373.55
6	......	......	375.10	376.75	373.55	373.35	372.60	374.00	373.15	373.55	374.15	373.50
7	......	......	375.10	376.50	372.75	373.30	372.50	373.90	373.45	373.70	374.05	373.75
8	......	......	375.05	376.05	372.45	374.65	372.40	373.90	373.45	373.60	374.10	373.55
9	......	......	375.15	375.65	372.25	374.25	372.35	373.90	373.55	373.90	374.55	373.50
10	......	......	375.95	375.35	371.95	373.75	372.55	373.35	373.55	373.75	374.35	373.55
11	......	......	377.05	378.40	371.85	373.50	372.70	373.70	373.45	373.80	374.10	373.55
12	......	......	377.70	379.50	372.00	373.40	372.60	373.70	373.50	373.90	374.05	373.55
13	......	378.78	378.35	378.10	371.95	373.30	372.75	373.55	373.65	373.65	373.90	373.55
14	......	377.95	380.75	377.25	372.25	373.15	372.60	373.65	373.45	373.65	373.35	373.50
15	......	377.45	379.95	376.45	371.95	373.40	372.55	374.20	373.50	373.80	373.75	373.45
16	......	377.45	380.15	376.15	371.75	373.45	372.75	373.75	373.50	373.90	373.95	373.35
17	......	377.15	377.95	375.75	371.60	373.35	372.65	373.45	373.60	373.70	373.85	373.55
18	......	377.25	375.70	375.50	373.00	373.25	372.50	373.45	373.55	373.85	373.75	373.55
19	......	......	375.45	376.75	373.75	373.25	372.45	373.35	373.70	374.05	373.60	373.60
20	......	......	375.65	376.10	373.25	373.55	372.45	373.35	373.65	374.55	373.65	373.55
21	......	......	376.15	375.65	372.75	374.05	372.60	373.35	373.85	374.90	373.80	373.60
22	......	......	376.45	375.05	374.10	373.85	372.45	373.40	374.10	374.80	373.75	373.50
23	......	......	375.90	374.65	375.20	373.55	372.35	373.35	373.50	374.90	373.80	373.60
24	......	......	375.35	374.35	375.90	373.40	372.55	373.50	373.55	374.05	373.90	373.70
25	......	......	380.30	374.05	375.15	373.25	372.65	373.55	373.55	374.20	374.10	373.95
26	......	......	383.05	374.90	374.85	373.70	372.50	373.65	373.40	373.65	374.05	374.60
27	......	......	383.30	374.50	375.50	374.00	372.35	373.55	373.55	373.85	373.90	374.15
28	......	376.40	382.45	375.75	376.50	373.95	372.15	373.65	373.60	373.70	373.85	374.05
29	......	......	381.25	374.45	378.15	373.85	372.45	374.15	373.45	374.10	373.75	373.90
30	......	......	379.65	374.20	377.85	373.55	372.60	374.15	373.55	374.25	373.70	373.90
31	......	......	378.50	.....	376.45	......	372.55	373.75	......	374.15	......	373.95

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Ilion, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	*a*	383.00	381.25	385.25	380.15	379.80	378.35	380.15	379.02	378.65	379.80	379.55
2	*a*	382.40	381.10	384.40	380.00	380.08	378.28	379.35	379.02	378.90	380.00	379.70
3	*a*	382.80	379.70	383.55	379.78	379.82	378.28	379.80	379.15	379.10	379.62	379.60
4	*a*	382.65	380.00	382.85	379.70	379.82	378.20	380.92	379.65	379.00	379.50	379.58
5	*a*	382.35	380.02	383.05	379.62	379.20	378.08	382.25	381.95	378.70	379.82	379.52
6	*a*	382.30	379.75	383.25	379.60	379.08	378.00	382.22	383.05	378.60	379.82	379.85
7	*a*	382.18	379.00	382.95	379.30	378.95	378.00	381.80	384.00	378.78	379.30	380.00
8	*a*	382.32	379.10	382.60	379.28	379.00	378.02	381.72	384.80	379.15	378.95	382.00
9	*a*	382.15	380.15	382.25	379.32	379.00	378.00	381.70	384.20	378.90	383.05	380.75
10	*a*	382.08	382.00	382.05	379.25	379.02	378.05	381.78	381.95	378.80	385.08	380.15
11	*a*	381.92	382.45	384.60	378.95	378.75	378.10	381.80	381.10	378.65	383.05	379.85
12	*a*	381.98	382.80	385.60	378.80	378.72	378.12	381.65	379.00	378.55	380.75	379.55
13	*a*	381.95	383.45	384.45	378.80	378.65	378.10	381.50	378.95	378.75	380.15	379.50
14	*a*	381.95	385.20	383.05	378.72	378.62	378.10	381.60	379.05	378.80	380.25	379.75
15	*a*	381.98	386.25	382.50	378.60	378.60	378.10	381.20	378.90	379.40	380.10	380.00
16	*a*	382.02	386.50	382.10	378.65	378.62	378.12	380.85	379.08	379.85	379.80	379.98
17	*a*	381.82	384.40	381.90	378.55	378.58	378.15	380.65	379.15	380.65	379.65	379.80
18	*a*	381.70	381.60	381.95	378.55	378.58	378.10	380.20	379.18	381.85	379.42	379.88
19	*a*	382.10	381.60	382.45	378.48	378.55	378.15	379.65	379.15	380.35	379.40	379.72
20	*a*	382.98	381.80	382.50	378.42	378.55	378.20	378.85	379.48	380.20	381.30	379.32
21	*a*	382.80	382.70	381.92	378.42	378.70	378.20	378.75	379.65	382.10	381.75	379.20
22	*a*	381.65	382.35	381.70	378.65	378.62	378.20	378.90	380.25	381.10	380.50	379.18
23	384.90	382.15	382.05	381.60	379.88	378.48	378.22	378.92	379.90	379.80	380.00	379.18
24	384.55	382.65	381.40	381.60	380.50	378.42	378.15	378.95	379.15	379.48	379.55	379.20
25	384.58	381.80	385.80	380.95	379.65	378.32	378.32	379.18	378.55	380.00	379.50	379.25
26	383.85	380.80	389.10	380.40	379.10	378.60	378.25	379.20	378.35	381.00	379.50	379.12
27	383.48	380.15	390.00	380.55	379.20	378.95	378.15	379.30	378.25	380.20	379.30	379.15
28	383.32	381.00	388.95	380.60	380.75	378.95	378.25	379.58	378.30	381.00	379.20	379.05
29	382.85	......	387.52	380.65	381.45	378.68	378.60	379.62	378.35	382.92	379.20	379.20
30	382.68	......	386.30	380.40	380.95	378.42	379.25	379.25	378.45	380.18	379.40	379.32
31	382.70	......	385.05	......	380.30	......	381.20	379.05	......	379.80	......	379.32

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Frankfort, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	*a*	384.22	382.38	386.28	381.12	380.40	379.50	380.20	379.22	378.75	379.90	379.75
2	*a*	383.48	381.75	385.62	380.98	380.52	379.50	379.72	378.70	379.08	380.08	379.80
3	*a*	383.90	382.10	384.95	380.85	380.32	379.38	380.05	378.70	379.30	379.75	379.82
4	*a*	383.75	381.80	384.08	380.68	380.05	379.25	380.85	380.55	379.18	379.58	379.70
5	*a*	383.45	381.65	385.02	380.72	379.92	379.20	382.40	382.65	378.92	380.00	379.62
6	*a*	383.95	381.02	384.70	380.70	379.92	379.20	382.42	383.65	378.82	379.80	380.30
7	*a*	384.62	380.48	384.20	380.58	379.85	379.30	382.02	383.68	378.80	379.32	380.20
8	*a*	385.32	381.00	383.80	380.50	379.90	379.25	381.90	383.80	379.12	379.58	382.15
9	*a*	385.85	381.45	383.38	380.50	379.98	379.15	381.90	384.10	379.20	383.00	381.00
10	*a*	386.55	383.28	383.18	380.38	380.00	379.28	382.00	382.10	378.88	385.85	380.28
11	*a*	386.50	384.12	386.15	380.18	379.82	379.32	381.95	379.62	378.80	383.35	380.05
12	*a*	386.75	384.42	387.05	380.15	379.80	379.38	381.95	379.75	378.60	381.52	379.82
13	*a*	386.32	385.15	385.78	380.10	379.75	379.40	381.83	379.70	378.80	380.48	379.72
14	*a*	386.20	387.15	384.28	380.08	379.75	379.30	382.05	379.65	378.90	380.58	379.88
15	*a*	386.22	*a*	383.70	380.00	379.70	379.30	381.30	379.62	379.25	380.40	380.48
16	*a*	386.15	*a*	383.30	380.00	379.70	379.30	378.65	379.75	380.05	379.92	380.25
17	*a*	385.65	*a*	383.02	379.92	379.70	379.30	378.90	379.75	380.65	379.68	379.98
18	*a*	385.22	*a*	382.85	379.88	379.70	379.25	378.95	379.80	382.05	379.60	380.20
19	*a*	385.55	382.88	383.60	379.90	379.62	379.30	379.10	379.60	380.45	379.48	379.88
20	*a*	386.18	383.12	383.55	379.82	379.62	379.30	378.93	379.80	380.12	381.68	379.40
21	*a*	384.78	384.05	383.00	379.80	379.78	379.35	378.60	380.22	382.00	381.98	379.38
22	*a*	382.80	383.90	382.75	379.92	379.65	379.35	379.27	380.50	381.40	380.40	379.32
23	*a*	383.18	382.65	382.60	380.60	379.60	379.30	379.25	380.40	380.08	380.00	379.30
24	*a*	383.48	382.80	382.60	381.25	379.60	379.25	379.15	379.25	379.58	379.75	379.35
25	*a*	383.38	387.45	382.05	380.68	379.50	379.30	378.97	379.12	380.40	379.65	379.45
26	*a*	383.02	391.82	381.65	380.12	379.75	379.25	379.25	379.08	381.22	379.42	379.55
27	*a*	384.15	392.70	381.42	379.92	379.88	379.20	379.25	378.75	380.40	379.40	379.42
28	*a*	382.55	391.45	381.38	381.38	379.78	379.35	379.37	378.80	381.35	379.35	379.32
29	*a*	......	389.38	381.45	382.55	379.70	379.38	379.85	378.78	382.95	379.32	379.32
30	*a*	......	387.62	381.28	381.62	379.62	379.30	379.50	378.85	380.28	379.62	379.60
31	*a*	......	386.72	......	380.82	......	381.55	379.25	......	379.90	......	379.50

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Genesee St. Bridge Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	399.44	398.19	397.49	400.04	a	395.59	395.19	396.24	395.39	395.39	397.04	396.24
2	400.44	398.29	397.54	399.99	a	395.74	395.14	395.29	395.34	395.84	397.04	396.14
3	400.84	398.59	397.54	399.84	a	396.04	395.14	395.14	395.24	396.09	397.04	396.09
4	401.04	398.89	397.44	399.89	a	395.94	395.04	395.14	395.24	395.74	397.19	396.04
5	401.84	399.14	397.39	400.00	a	395.94	395.04	395.09	395.24	395.39	397.19	395.99
6	402.59	399.14	397.34	400.19	a	395.89	395.04	395.04	395.24	395.19	397.14	395.94
7	402.64	398.84	397.34	400.34	a	395.84	394.94	395.04	395.24	395.14	397.09	396.04
8	402.54	398.29	397.34	400.14	395.64	395.94	394.94	395.04	395.24	395.09	397.04	396.39
9	401.89	397.79	397.84	399.79	395.74	395.84	394.94	395.04	395.24	395.04	397.84	396.54
10	400.94	397.54	398.69	399.39	395.84	395.84	394.99	395.04	395.14	395.04	398.84	396.64
11	400.24	397.44	399.49	400.54	395.84	395.74	395.04	394.94	395.14	394.94	398.94	396.54
12	400.49	397.44	399.94	402.44	395.74	395.74	395.04	394.94	395.14	394.09	398.49	396.69
13	400.84	397.34	400.19	401.74	395.79	395.64	395.04	394.94	395.14	395.24	398.24	396.59
14	401.04	397.29	400.99	401.24	395.84	395.59	395.04	394.84	395.14	395.24	397.79	396.44
15	400.74	397.24	401.19	400.74	395.79	395.44	394.94	394.84	395.14	395.24	397.29	396.44
16	400.54	397.24	401.19	399.99	395.74	395.14	394.94	394.84	395.14	395.14	397.09	396.44
17	400.84	397.14	401.14	399.29	395.64	395.44	394.94	394.84	395.24	395.14	396.99	396.34
18	401.79	397.14	400.84	398.99	395.64	395.34	394.94	394.84	395.54	395.14	396.64	396.34
19	402.34	397.04	400.39	400.19	395.64	395.34	394.89	394.84	395.44	395.14	396.24	396.24
20	402.44	397.04	400.04	400.59	395.74	395.34	394.84	394.84	395.34	395.29	396.39	396.24
21	402.54	397.14	399.54	400.29	395.69	395.49	394.84	394.84	395.34	396.34	396.39	396.24
22	402.64	397.19	399.24	399.89	395.84	395.54	394.99	394.89	396.34	397.24	395.99	396.19
23	402.34	397.39	399.14	399.54	395.79	395.44	395.04	394.94	395.94	397.44	395.74	396.04
24	401.69	397.44	400.39	399.04	395.69	395.34	395.04	395.14	395.69	397.34	395.74	396.04
25	401.04	397.44	401.69	398.54	396.74	395.34	395.24	395.14	395.49	397.24	395.74	396.34
26	400.69	397.34	403.29	398.24	396.44	395.54	395.29	395.19	395.24	397.29	395.74	396.44
27	400.44	397.34	404.59	398.24	396.29	395.64	395.24	395.49	395.24	397.34	395.64	396.34
28	400.04	397.49	404.49	398.14	396.14	395.69	395.54	395.59	395.19	397.24	395.64	396.19
29	399.64	......	402.94	398.24	396.49	395.59	395.49	395.84	395.14	397.19	395.94	396.14
30	399.09	......	400.94	398.44	396.29	395.34	395.29	395.69	395.14	397.14	396.19	396.04
31	398.54	......	400.14	......	395.84	......	395.14	395.49	......	397.14	......	396.04

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Nine-Mile Creek near Stittville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	485.07	483.92	483.92	484.92	484.02	483.92	483.92	483.97	483.92	484.92	485.32	484.07
2	484.17	483.92	483.92	484.07	484.02	483.97	483.92	483.97	483.92	484.97	485.22	484.02
3	488.22	483.92	483.92	484.07	483.92	484.02	483.92	483.92	483.92	484.07	485.22	484.02
4	486.17	483.82	483.97	484.97	483.92	484.02	483.92	483.92	483.92	484.02	485.37	484.07
5	485.17	483.82	483.97	484.92	483.92	484.02	483.92	483.92	483.92	484.07	485.37	484.12
6	485.07	483.82	483.97	484.17	483.97	484.07	483.92	483.92	483.92	484.12	485.42	484.02
7	486.07	483.92	484.02	484.22	483.97	484.12	483.82	483.97	483.82	484.02	485.37	484.07
8	486.97	483.92	484.02	484.27	483.92	484.02	483.82	484.02	483.82	484.02	485.37	485.07
9	485.47	483.92	484.02	485.02	483.92	483.92	483.82	484.02	482.82	484.17	486.42	485.07
10	485.02	483.92	484.02	485.02	483.92	483.92	483.82	483.97	482.82	484.17	485.37	485.12
11	485.17	483.92	484.12	485.17	483.92	483.92	483.82	483.82	482.82	484.07	485.47	485.02
12	485.27	483.92	484.17	485.12	483.92	483.92	483.82	483.82	482.82	484.02	485.42	484.97
13	485.17	483.92	485.92	484.12	483.92	483.92	483.82	482.82	482.82	484.07	485.47	485.02
14	485.07	483.92	488.47	484.17	483.92	483.82	483.82	482.82	482.82	484.07	485.87	484.97
15	484.92	483.92	487.57	484.22	483.92	483.82	483.87	482.82	482.82	484.02	485.22	483.97
16	484.97	483.92	485.62	484.32	483.92	483.82	483.92	482.82	482.92	484.02	485.12	483.97
17	486.87	483.92	485.17	484.32	483.92	483.82	483.92	482.82	482.92	484.07	485.02	483.92
18	485.87	484.07	485.07	484.37	484.02	483.82	483.92	482.82	483.82	484.12	485.07	483.92
19	485.17	484.07	484.97	484.32	484.07	483.82	483.92	482.82	483.92	484.17	485.17	483.92
20	485.07	484.17	484.22	484.22	484.07	483.92	483.92	483.82	483.92	484.17	485.97	483.92
21	485.12	484.17	484.17	484.27	484.17	483.92	484.02	483.82	483.97	484.27	485.62	483.92
22	485.22	484.22	484.27	484.37	484.07	483.82	483.92	483.82	484.07	484.87	485.12	484.02
23	485.62	484.02	484.17	484.27	484.17	483.82	483.97	483.82	484.97	484.97	484.27	484.87
24	485.27	484.02	485.17	484.17	484.17	483.82	484.02	483.87	484.02	485.15	484.22	484.92
25	485.07	483.92	488.09	484.12	484.27	483.92	484.07	483.92	484.02	485.15	484.12	484.92
26	484.97	483.92	486.62	484.02	484.12	483.97	484.07	483.92	484.02	485.37	484.02	484.02
27	484.07	483.97	485.57	484.02	484.07	483.92	484.12	483.92	484.02	485.37	484.02	484.02
28	484.02	484.02	485.12	484.17	484.22	483.92	484.17	483.92	484.07	485.27	484.07	484.02
29	483.92	......	485.02	484.12	484.12	483.92	484.02	483.92	484.17	485.22	484.02	483.92
30	483.92	......	484.92	484.12	483.97	483.92	483.92	483.92	484.87	485.27	484.12	483.92
31	483.92	......	484.92	......	483.97	......	483.92	a	......	485.32	......	483.92

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River below State Dam at Rome, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.*a*	Aug.*a*	Sept.*a*	Oct.*a*	Nov.*a*	Dec.
1913												
1.....	428.66	428.66	428.06	429.46	427.26	426.66	......	......	......	......	......	*a*
2.....	428.46	428.66	427.96	428.86	427.26	426.66	......	......	......	......	......	
3.....	428.66	428.66	427.86	428.86	427.26	426.66	......	......	......	......	......	*a*
4.....	428.66	428.66	427.86	427.66	427.26	*a*	......	......	......	......	......	*a*
5.....	428.66	428.66	427.66	428.46	427.26	*a*	......	......	......	......	......	*a*
6.....	428.66	428.56	427.56	428.46	427.26	*a*	......	......	......	......	......	*a*
7.....	428.76	428.66	427.46	428.26	427.26	*a*	......	......	......	......	......	*a*
8.....	428.96	428.66	427.46	428.46	426.96	*a*	......	......	......	......	......	426.66
9.....	428.66	428.66	427.66	428.46	426.96	*a*	......	......	......	......	......	426.66
10.....	428.76	428.46	427.66	428.26	426.96	*a*	......	......	......	......	......	426.66
11.....	428.66	428.46	427.66	428.46	426.96	*a*	......	......	......	......	......	426.66
12.....	428.96	428.46	427.66	428.46	426.96	*a*	......	......	......	......	......	426.66
13.....	428.76	428.46	427.96	428.46	426.96	*a*	......	......	......	......	......	426.66
14.....	428.66	428.56	427.96	428.36	426.76	*a*	......	......	......	......	......	426.66
15.....	428.76	428.56	427.96	428.36	426.66	*a*	......	......	......	......	......	426.66
16.....	428.76	428.56	427.46	428.36	426.46	*a*	......	......	......	......	......	426.66
17.....	428.96	428.56	427.46	428.36	426.46	*a*	......	......	......	......	......	426.66
18.....	429.06	429.46	427.46	428.36	426.46	*a*	......	......	......	......	......	426.66
19.....	428.66	428.96	427.26	428.36	426.46	*a*	......	......	......	......	......	426.66
20.....	428.66	428.26	427.26	428.36	426.46	*a*	......	......	......	......	......	426.66
21.....	428.86	428.26	427.26	428.36	426.46	*a*	......	......	......	......	......	426.66
22.....	428.66	428.26	427.26	428.26	426.46	*a*	......	......	......	......	......	426.66
23.....	428.66	428.56	427.06	428.36	426.46	*a*	......	......	......	......	......	426.66
24.....	428.86	428.46	427.06	428.46	426.46	*a*	......	......	......	......	......	426.66
25.....	428.86	428.16	427.06	427.26	426.46	*a*	......	......	......	......	......	426.66
26.....	428.66	428.16	427.46	427.26	426.46	*a*	......	......	......	......	......	426.66
27.....	428.96	428.06	428.26	427.26	426.46	*a*	......	......	......	......	......	426.66
28.....	428.76	428.06	429.26	427.26	426.46	*a*	......	......	......	......	......	426.66
29.....	428.66	......	429.46	427.26	427.26	*a*	......	......	......	......	......	426.66
30.....	428.66	......	429.46	427.26	427.06	*a*	......	......	......	......	......	426.66
31.....	428.76	......	429.26	......	426.86	......	......	......	......	......	......	426.66

a Below datum of gage (426.46).

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above State Dam at Rome, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	432.43	432.73	432.13	433.53	431.93	431.73	431.73	431.73	431.53	430.73	430.73	430.63
2.....	432.43	432.73	432.03	433.03	431.93	431.73	431.73	431.73	431.13	430.73	430.73	430.73
3.....	432.73	432.73	431.93	433.03	431.93	431.73	431.73	431.73	431.23	430.73	430.73	431.73
4.....	432.73	432.73	431.93	432.53	431.93	431.53	431.53	431.73	431.33	430.73	430.73	428.73
5.....	432.73	432.73	431.93	432.73	431.93	431.53	431.53	431.73	431.73	431.13	430.73	428.73
6.....	432.73	432.73	431.93	432.73	431.93	431.53	431.53	431.73	431.73	431.73	430.73	431.73
7.....	432.93	432.73	431.83	432.63	431.93	431.53	431.53	430.73	431.73	431.13	430.73	430.73
8.....	433.03	432.73	431.73	432.73	431.73	431.53	431.53	430.73	431.73	430.73	430.73	431.93
9.....	432.73	432.73	431.73	432.73	431.73	431.53	431.53	430.73	431.13	430.63	431.93	431.93
10.....	432.83	432.53	431.73	432.63	431.73	431.53	431.73	430.73	431.73	430.63	431.73	431.93
11.....	432.73	432.53	431.83	432.73	431.73	431.53	431.73	430.73	431.73	431.73	431.13	431.93
12.....	433.03	432.53	431.83	432.73	431.73	431.53	431.73	430.73	431.73	431.13	431.13	431.93
13.....	432.83	432.53	432.13	432.73	431.73	431.53	431.73	430.73	431.73	430.73	430.73	431.93
14.....	432.73	432.53	432.13	432.63	431.73	431.53	431.73	430.73	431.73	430.73	430.73	431.93
15.....	432.73	432.53	432.13	432.63	431.73	431.53	431.73	430.73	431.53	430.73	430.73	431.93
16.....	432.73	432.63	432.03	432.63	431.73	431.53	431.73	431.73	431.53	430.73	430.73	431.93
17.....	433.03	432.63	432.03	432.63	431.73	431.53	431.73	431.73	431.53	430.73	430.73	431.93
18.....	433.13	432.93	431.93	432.63	431.73	431.53	431.73	431.73	431.53	430.73	430.73	431.93
19.....	432.73	432.43	431.83	432.63	431.73	431.53	431.73	431.73	431.53	430.73	430.73	431.93
20.....	432.73	432.43	431.93	432.63	431.73	431.53	431.73	430.73	431.33	431.13	431.83	431.93
21.....	432.93	432.33	431.93	432.63	431.73	431.53	431.73	431.13	431.73	431.13	430.33	431.93
22.....	432.73	432.33	431.93	432.53	431.73	431.43	431.73	431.23	431.73	431.13	430.63	431.93
23.....	432.73	432.53	432.13	432.63	431.73	431.43	431.73	431.53	430.73	431.13	430.73	431.93
24.....	432.93	432.43	432.13	432.73	431.73	431.43	431.73	431.53	430.73	431.13	430.73	431.93
25.....	432.93	432.23	432.33	431.93	431.73	431.43	431.73	431.53	430.73	431.13	430.73	431.93
26.....	432.73	432.23	432.53	431.93	431.73	431.43	431.73	431.53	430.73	431.13	430.73	431.93
27.....	433.03	432.13	432.73	431.93	431.73	431.73	431.73	431.53	430.73	431.13	430.73	431.93
28.....	432.83	432.13	432.93	431.93	431.73	431.73	431.73	431.53	431.13	431.13	430.73	431.93
29.....	432.73	......	433.33	431.93	431.33	431.73	431.73	431.53	431.13	431.13	430.73	431.93
30.....	432.73	......	433.33	431.93	431.33	431.73	431.73	431.53	431.13	430.73	430.73	431.93
31.....	432.83	......	433.33	......	431.23	......	431.73	431.53	......	430.73	......	431.93

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Floyd Ave. Bridge, Rome, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	447.46	448.11	446.81	448.71	446.71	446.86	447.01	446.81	446.61	446.61	446.71	446.61
2.....	447.51	448.11	446.61	448.71	446.71	446.86	447.01	446.81	446.61	446.61	446.46	446.59
3.....	447.66	448.16	446.63	448.16	446.71	446.86	446.96	446.76	446.56	446.61	446.39	446.53
4.....	447.86	448.16	446.61	446.41	446.71	446.91	446.99	446.76	446.61	446.61	446.53	446.43
5.....	447.91	448.11	446.53	447.81	446.71	446.93	447.01	446.71	446.61	446.61	446.61	446.39
6.....	448.03	448.11	446.51	447.73	446.71	446.96	447.01	446.71	446.61	446.61	446.61	446.41
7.....	448.09	448.11	446.59	447.81	446.61	446.91	447.01	446.71	446.61	446.59	446.61	446.41
8.....	448.03	448.11	446.61	447.81	446.61	446.91	447.01	446.71	446.61	446.61	446.61	446.36
9.....	448.06	448.11	446.61	447.76	446.59	446.93	446.96	446.71	446.61	446.59	446.91	446.36
10.....	448.06	448.11	446.61	447.79	446.51	446.91	446.96	446.71	446.59	446.61	446.71	446.31
11.....	448.21	448.06	446.83	447.81	446.41	446.93	446.99	446.71	446.56	446.61	446.49	446.31
12.....	448.01	448.01	447.03	447.81	446.41	446.93	447.01	446.71	446.56	446.56	446.46	446.29
13.....	448.01	448.01	446.96	447.81	446.41	446.93	447.01	446.66	446.56	446.61	446.41	446.26
14.....	447.96	447.96	446.71	447.81	446.37	446.91	446.99	446.66	446.56	446.59	446.51	446.31
15.....	447.91	447.91	446.73	447.76	446.37	446.91	446.96	446.66	446.56	446.56	446.56	446.31
16.....	447.99	447.91	446.61	447.76	446.33	446.91	446.99	446.61	446.53	446.61	446.46	446.26
17.....	448.03	447.91	446.61	447.76	446.31	446.81	447.01	446.66	446.51	446.61	446.51	446.31
18.....	448.16	447.96	446.63	447.71	446.31	446.96	446.99	446.66	446.56	446.61	446.51	446.31
19.....	448.21	447.93	446.61	447.71	446.31	446.91	446.96	446.71	446.53	446.61	446.43	446.29
20.....	448.16	447.86	446.61	447.71	446.31	446.91	446.96	446.71	446.51	446.61	446.41	446.31
21.....	448.11	447.81	446.63	447.71	446.31	446.91	446.93	446.71	446.51	446.63	446.53	446.31
22.....	448.11	447.81	446.61	447.76	446.36	446.91	446.91	446.66	446.51	446.53	446.61	446.29
23.....	448.11	447.81	446.61	447.71	446.41	446.91	446.91	446.69	446.46	446.49	446.61	446.26
24.....	448.19	447.81	446.66	447.69	446.41	446.91	446.86	446.69	446.46	446.61	446.61	446.29
25.....	448.21	447.36	447.01	447.63	446.41	446.96	446.86	446.66	446.51	446.61	446.51	446.31
26.....	448.21	447.31	447.26	446.81	446.36	447.01	446.81	446.69	446.59	446.61	446.61	446.31
27.....	448.19	447.21	448.26	446.81	446.41	447.01	446.81	446.63	446.61	446.61	446.61	446.31
28.....	448.16	446.91	448.71	446.81	446.39	447.01	446.81	446.61	446.61	446.56	446.56	446.31
29.....	448.16	......	448.71	446.79	446.51	447.01	446.83	446.61	446.61	446.61	446.61	446.31
30.....	448.16	......	448.71	446.71	446.86	447.01	446.81	446.61	446.61	446.66	446.61	446.36
31.....	448.11	......	448.71	......	446.86	......	446.83	446.61	......	446.66	......	446.31

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River below Dam at Ridge Mills, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	460.50	460.60	459.20	460.80	459.20	459.50	459.40	459.40	459.30	459.20	459.20	459.20
2.....	460.50	460.60	459.20	460.80	459.20	459.50	459.30	459.40	459.30	459.20	459.00	459.10
3.....	460.50	460.60	459.20	459.70	459.20	459.50	459.30	459.40	459.30	459.20	459.00	458.80
4.....	460.50	460.60	459.20	459.70	459.20	459.50	459.30	459.40	459.30	459.10	459.00	458.80
5.....	460.50	460.60	459.20	460.40	459.20	459.50	459.30	459.40	459.30	459.10	459.00	458.80
6.....	460.50	460.50	459.20	460.40	459.20	459.50	459.30	459.40	459.30	459.10	459.00	458.80
7.....	460.60	460.50	459.20	460.30	459.20	459.50	459.30	459.40	459.30	459.00	459.30	459.30
8.....	460.60	460.50	459.20	460.30	459.20	459.50	459.30	459.20	459.30	459.00	459.30	459.00
9.....	460.50	460.50	459.20	460.20	459.20	459.50	459.30	459.20	459.30	459.20	459.50	458.90
10.....	460.50	460.50	459.20	460.20	459.10	459.50	459.30	459.20	459.30	459.40	459.20	458.90
11.....	460.60	460.50	459.40	460.30	459.10	459.50	459.40	459.20	459.30	459.40	459.10	458.90
12.....	460.60	460.50	459.60	460.30	459.10	459.50	459.40	459.20	459.30	459.20	459.00	458.90
13.....	460.60	460.50	459.30	460.20	459.10	459.50	459.40	459.20	459.30	459.20	459.00	458.90
14.....	460.60	460.40	459.30	460.30	459.10	459.50	459.40	459.30	459.30	459.20	459.00	458.90
15.....	460.60	460.40	459.20	460.30	459.10	459.50	459.40	459.30	459.30	459.20	459.00	458.90
16.....	460.60	460.40	459.20	460.20	459.10	459.50	459.40	459.20	459.20	459.20	459.00	458.90
17.....	460.70	460.40	459.20	460.20	459.10	459.50	459.40	459.20	459.20	459.20	459.00	458.90
18.....	460.70	461.00	459.20	460.20	459.10	459.50	459.40	459.20	459.20	459.20	459.00	458.90
19.....	460.60	461.00	459.20	460.30	459.10	459.50	459.40	459.20	459.20	459.20	459.00	458.90
20.....	460.60	460.80	459.20	460.20	458.90	459.50	459.40	459.20	459.20	459.30	459.20	458.90
21.....	460.60	459.90	459.20	460.20	458.90	459.40	459.40	459.20	459.30	459.10	458.70	458.90
22.....	460.60	459.60	459.20	460.20	458.90	459.40	459.40	459.20	459.30	459.00	459.20	458.90
23.....	460.60	460.40	459.20	460.20	458.90	459.40	459.40	459.30	459.10	459.20	459.20	458.90
24.....	460.60	460.40	459.20	460.20	458.90	459.40	459.40	459.30	459.10	459.30	459.20	458.90
25.....	460.60	460.90	459.70	459.30	458.90	459.40	459.40	459.30	459.10	459.30	459.20	458.90
26.....	460.60	459.70	460.20	459.30	458.90	459.40	459.40	459.30	459.10	459.20	459.20	458.90
27.....	460.60	459.70	460.20	459.30	458.90	459.30	459.40	459.30	459.10	459.20	459.20	458.90
28.....	460.60	459.30	461.00	459.30	459.50	459.30	459.40	459.30	459.10	459.20	459.30	458.90
29.....	460.60	......	461.00	459.30	459.50	459.30	459.40	459.30	459.10	459.20	459.20	458.90
30.....	460.60	......	461.00	459.30	459.50	459.30	459.40	459.30	459.20	459.20	459.20	458.90
31.....	460.60	......	461.00	......	459.50	......	459.40	459.30	......	459.20	......	458.90

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above Dam at Ridg Mills, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	467.12	467.22	466.12	467.42	466.12	466.22	466.22	466.22	466.02	466.02	466.02	466.02
2.....	467.12	467.22	466.12	467.42	466.12	466.22	466.12	466.22	466.02	466.02	465.92	465.92
3.....	467.12	467.22	466.12	466.72	466.12	466.22	466.12	466.22	466.02	466.02	465.82	465.72
4.....	467.12	467.22	466.02	466.72	466.12	466.22	466.12	466.22	466.02	465.92	465.72	465.72
5.....	467.12	467.22	466.02	467.02	466.12	466.22	466.12	466.22	466.02	465.92	465.82	465.72
6.....	467.12	467.12	466.02	467.02	466.12	466.32	466.12	466.22	466.02	465.92	465.82	465.72
7.....	467.22	467.12	465.92	467.02	466.12	466.32	466.12	466.22	466.02	465.82	466.02	466.12
8.....	467.22	467.12	465.92	467.02	466.12	466.32	466.12	465.92	466.02	465.82	466.12	465.82
9.....	467.12	467.12	465.92	466.92	466.12	466.32	466.12	465.92	466.02	466.02	466.62	465.82
10.....	467.12	467.12	466.12	466.92	465.92	466.32	466.12	465.92	466.02	466.22	466.22	465.82
11.....	467.22	467.12	466.12	467.02	465.82	466.32	466.22	465.92	466.02	466.22	465.92	465.82
12.....	467.22	467.12	466.22	467.02	465.82	466.32	466.22	465.92	466.02	466.02	465.92	465.82
13.....	467.22	467.12	466.32	466.92	465.82	466.32	466.22	465.92	466.02	466.02	465.92	465.82
14.....	467.22	467.02	466.22	467.02	465.82	466.22	466.22	466.12	466.02	466.02	465.92	465.82
15.....	467.22	467.02	466.22	467.02	465.82	466.22	466.22	466.12	466.02	466.02	465.92	465.82
16.....	467.22	467.02	466.12	466.92	465.82	466.22	466.22	465.92	465.92	466.02	465.92	465.82
17.....	467.32	467.02	466.12	466.92	465.82	466.22	466.22	465.92	465.92	466.02	465.92	465.82
18.....	467.32	467.62	466.12	466.92	465.82	466.22	466.22	465.92	465.92	466.02	465.92	465.82
19.....	467.22	467.62	466.12	467.02	465.82	466.22	466.22	466.02	465.92	466.02	465.92	465.82
20.....	467.22	467.42	466.12	466.92	465.82	466.22	466.22	466.02	465.92	466.02	466.02	465.82
21.....	467.22	466.72	466.12	466.92	465.82	466.22	466.22	466.02	466.02	466.02	465.62	465.82
22.....	467.22	466.42	466.12	466.92	465.82	466.22	466.22	466.02	466.02	465.82	466.02	465.82
23.....	467.22	466.72	466.12	466.92	465.82	466.22	466.22	466.02	465.92	466.02	466.02	465.82
24.....	467.22	466.72	466.12	466.92	465.82	466.22	466.22	466.02	465.92	466.12	466.02	465.82
25.....	467.22	467.22	466.22	466.22	465.82	466.22	466.22	466.02	465.92	466.12	466.02	465.82
26.....	467.22	466.42	466.92	466.22	465.82	466.22	466.22	466.02	465.92	466.02	466.02	465.82
27.....	467.22	466.42	467.02	466.22	465.82	466.32	466.22	466.02	465.92	466.02	466.02	465.82
28.....	467.22	466.32	467.62	466.22	466.32	466.32	466.22	466.02	465.92	466.02	466.12	465.82
29.....	467.22	......	467.62	466.22	466.32	466.32	466 22	466.02	465.92	466.02	466.02	465.82
30.....	467.22	......	467.62	466.22	466.32	466.32	466.22	466.02	466.02	466.02	466.02	465.82
31.....	467.22	......	467.62	......	466.22	......	466.22	466.02	......	466.02	......	465.82

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Delta Reservoir at Delta Dam.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	......	......	......	......	536.00	536.85	530.85	523.85	516.30	510.35	521.35	536.95
2.....	......	......	......	......	536.00	536.75	530.80	523.50	515.95	510.30	521.55	537.15
3.....	......	......	......	......	536.00	536.70	530.70	523.25	515.65	511.20	521.80	537.35
4.....	......	......	......	......	535.90	536.55	530.55	522.95	515.40	511.25	522.20	537.50
5.....	......	......	......	......	535.90	536.40	530.40	522.60	515.15	511.05	522.55	537.65
6.....	......	......	......	......	535.90	536.30	530.25	522.20	514.85	510.85	522.60	537.75
7.....	......	......	......	......	535.80	536.05	530.05	521.95	514.55	510.80	522.60	538.10
8.....	......	......	......	......	535.80	535.90	529.95	521.75	514.15	510.80	522.60	538.50
9.....	......	......	......	......	535.70	535.65	529.75	521.60	513.70	510.75	524.10	539.95
10.....	......	......	......	......	535.50	535.45	529.55	521.55	513.45	510.60	527.80	540.15
11.....	......	......	......	......	535.50	535.25	529.35	521.45	513.15	510.10	528.60	540.35
12.....	......	......	......	......	535.50	534.95	529.15	521.25	512.80	509.90	529.20	540.50
13.....	......	......	......	......	535.50	534.75	528.85	521.05	512.50	509.85	529.80	540.60
14.....	......	......	......	......	535.50	534.55	528.65	520.75	512.15	509.75	530.50	540.75
15.....	......	......	......	......	535.50	534.35	528.35	520.45	511.85	509.55	530.90	541.05
16.....	......	......	......	......	535.50	534.15	528.05	520.25	511.50	509.35	530.25	541.20
17.....	......	......	......	......	535.50	533.85	527.75	520.05	511.25	509.15	531.55	541.35
18.....	......	......	......	......	535.50	533.55	527.45	519.75	511.05	509.00	531.85	541.55
19.....	......	......	......	......	535.50	533.35	527.25	519.50	510.85	509.90	531.95	541.70
20.....	......	......	......	......	535.50	533.05	526.95	519.20	510.60	510.05	533.60	541.75
21.....	......	......	......	......	535.50	532.85	526.75	518.95	510.35	514.40	534.60	541.85
22.....	......	......	......	......	535.65	532.65	526.45	518.75	511.10	515.75	535.00	541.90
23.....	......	......	......	......	536.05	532.55	526.25	518.55	511.30	516.05	535.25	541.95
24.....	......	......	......	......	536.40	532.25	525.95	518.35	511.40	516.40	535.45	542.05
25.....	......	......	......	......	536.55	532.05	525.75	518.05	511.50	518.60	535.65	542.20
26.....	......	......	......	......	536.70	531.80	525.35	517.75	511.45	519.55	535.85	542.30
27.....	......	......	......	......	536.75	531.75	525.15	517.55	511.25	520.25	536.05	542.30
28.....	......	......	......	......	537.00	531.55	524.95	517.35	511.00	520.60	536.20	542.30
29.....	......	......	......	......	537.25	531.40	524.75	517.05	510.70	520.90	536.35	542.30
30.....	......	......	......	......	537.25	531.20	524.50	516.85	510.45	521.05	536.55	542.30
31.....	......	......	......	......	537.05	......	524.10	516.65	......	521.20	......	542.40

STONY CREEK.

STONY CREEK AT CRESCENT, N. Y.

Stony creek flows into the Mohawk river at the village of Crescent a short distance above the Erie canal aqueduct. The gagings of this stream which are here given were made by means of a sharp-crested weir located about fifty feet upstream from where the stream passes under the Erie canal. The weir was constructed in April, 1912, and records maintained for the balance of the year. This station is now abandoned. This stream should not be confused with one of the same name which flows into the Mohawk river about five miles further upstream, near Vischer's Ferry.

Mean Daily Discharge, Second-feet, of Stony Creek at Crescent, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	......	......	......	......	2.53	5.91	2.35	2.17	*2.73	3.53	7.65	*2.17
2	......	......	......	......	4.41	*4.41	2.17	2.17	2.93	2.53	7.65	3.97
3	......	......	......	......	2.17	7 11	2.17	2.17	6.39	2.35	*7.11	7.38
4	......	......	......	......	2.35	5.91	2.17	*2.17	5.40	2.35	6.15	5.91
5	......	......	......	......	*1.05	3 53	2.17	2.17	4.19	2.17	4.63	3.75
6	......	......	......	......	5 65	4.41	2.00	2.17	5.65	*2.35	3.97	22.94
7	......	......	......	......	6.87	6.87	*2.00	2.00	4.63	2.35	9.05	15.65
8	......	......	......	......	6.39	4.19	2.00	2.00	*2.53	2.35	19.20	*14.61
9	......	......	......	......	10 21	*2.17	2.00	2.17	2.35	2.35	14.96	13.00
10	......	......	......	......	8.20	2.35	1.05	2.35	2.00	3.13	*11.42	11.74
11	......	......	......	......	6 15	2.00	2.17	*3.13	2.00	6.87	9.91	10.51
12	......	......	......	......	*3 53	2.17	2.17	2.73	2.35	8.76	7.93	9.05
13	......	......	......	......	6 63	2.35	2.17	2.53	2.17	*8.47	10.21	7.93
14	......	......	......	3 03	8.20	2.35	*2.35	2.35	2.17	7.11	28.12	5.40
15	......	......	......	4 08	5.65	2.17	2.17	2.73	*2.35	2.73	15.30	*2.53
16	......	......	......	4.89	9.62	*2.17	2.17	2.53	4.41	2.53	9.33	6.15
17	......	......	......	2 53	18 47	2.17	2.17	2.35	4.19	2.53	*6.15	5.14
18	......	......	......	4 11	7 38	2.53	2 53	*2.73	3.97	2.53	4.63	6.15
19	......	......	......	8 29	*5.65	2.00	2.35	2.73	4.63	4.89	3.97	23.33
20	......	......	......	2 73	6.87	1.82	2.17	2.53	4.41	*5.91	2.53	13.97
21	......	......	......	*2 53	5 65	2.00	*2.73	2.35	3.13	5.40	2.35	9.91
22	......	......	......	2 53	12.68	2.00	2.53	2.35	*2.35	4.89	2.17	*8.47
23	......	......	......	3.33	6.87	*1.82	2.35	2.73	2.35	9.33	2.17	7.93
24	......	......	......	0.25	5 91	2.00	2.35	2.35	2.73	*a*	*2.53	7.38
25	......	......	......	0 55	5.14	1.82	1.05	*2.73	2.53	*a*	5.91	6.87
26	......	......	......	2 35	*3 33	1 64	1.34	2.93	2.53	39.65	4.89	5.91
27	......	......	......	2.53	2.53	1.82	1.82	2.53	2.53	*12.37	4.19	7.93
28	......	......	......	*2.00	2.00	2.17	*1 05	2 35	2.17	10.51	3.53	6.63
29	......	......	......	2.53	2.35	2.35	2.35	2.35	*3.13	9.62	2.53	*4.63
30	......	......	......	6.87	12.68	*2.35	2 35	2.35	3.33	8.76	2.53	13.97
31	......	......	......	......	8.20	......	2.35	2.35	......	7.65	......	12.37
Mean	......	......	......	3.26	6.30	2.95	2.09	2.43	3.27	6.41	7.42	9.14

a Beyond limits of measuring weir. * Sunday.

Monthly Discharge of Stony Creek at Crescent, N. Y.
[Drainage area, 5.16 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
April	8.20	0.25	3.26	0.631	0.704
May	18.47	1.05	6.30	1.22	1.41
June	7.11	1.64	2.95	0.572	0.638
July	2.73	1.05	2.09	0.405	0.467
August	3.13	2.00	2.43	0.471	0.543
September	6.39	2.00	3.27	0.634	0.707
October	[a]39.65	2.17	6.41	1.24	1.43
November	28.12	2.17	7.42	1.44	1.61
December	23.33	2.17	9.14	1.77	2.04

[a] Actual maximum beyond limits of measuring weir.

MOHAWK RIVER AT VISCHER'S FERRY, N. Y.

This gaging station is located at Vischer's Ferry, about one mile below the State dam at Vischer's Ferry. The drainage area at this point is 3,420 square miles.

A sloping staff gage is fastened to an old bridge abutment, but for extreme low water a portable automatic gage is used.

The channel is composed of coarse gravel and indications are that it is of a permanent character. Current-meter discharge measurements have been made by wading.

Mean Daily Gage Height, in Feet, of Mohawk River at Vischer's Ferry, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	......	......	......	......	3.18	2.83	2.79	3.02	3.50	3.75
2	......	......	......	......	......	......	3.12	2.90	2.74	2.98	3.55	4.30
3	......	......	......	......	......	......	3.10	2.84	2.77	3.00	3.40	4.40
4	......	......	......	......	......	......	2.98	2.89	2.75	3.10	3.44	4.20
5	......	......	......	......	......	......	2.98	2.94	2.65	3.46	3.36	3.85
6	......	......	......	......	......	......	3.02	2.90	2.75	3.35	3.28	3.65
7	......	......	......	......	......	......	2.92	2.84	2.74	3.22	3.50	5.00
8	......	......	......	......	......	......	2.96	2.81	2.76	3.22	3.24	4.90
9	......	......	......	......	......	......	2.97	2.80	2.70	2.89	3.50	5.80
10	......	......	......	......	......	......	3.00	2.95	2.75	3.05	12.20	4.50
11	......	......	......	......	......	......	2.91	2.87	2.82	2.95	10.00	4.50
12	......	......	......	......	......	......	2.87	2.84	2.80	2.89	7.00	4.10
13	......	......	......	......	......	......	2.86	2.82	2.78	2.98	5.60	4.20
14	......	......	......	......	......	......	2.78	2.81	2.74	2.99	5.00	4.20
15	......	......	......	......	......	......	2.88	2.83	2.73	2.91	5.10	4.80
16	......	......	......	......	......	......	3.00	2.86	2.96	2.92	4.80	4.40
17	......	......	......	......	......	......	2.96	2.84	2.83	2.97	4.40	4.50
18	......	......	......	......	......	......	2.91	2.85	......	2.96	4.10	3.95
19	......	......	......	......	......	......	2.90	2.72	......	2.94	4.10	3.90
20	......	......	......	......	......	......	......	2.79	2.75	2.98	4.50	3.55
21	......	......	......	......	......	......	2.88	2.83	2.69	3.13	6.10	3.50
22	......	......	......	......	......	......	2.88	2.80	2.85	5.50	5.70	3.55
23	......	......	......	......	......	......	2.88	2.87	2.74	4.80	5.10	3.48
24	......	......	......	......	......	3.05	2.91	2.77	3.35	4.40	4.40	3.42
25	......	......	......	......	......	2.88	2.90	2.79	3.19	3.90	4.10	3.60
26	......	......	......	......	......	3.25	2.89	2.81	2.92	4.00	4.40	3.45
27	......	......	......	......	......	3.00	2.88	2.83	2.91	4.80	4.00	3.75
28	......	......	......	......	......	2.90	......	2.81	3.12	5.10	3.90	......
29	......	......	......	......	......	3.30	2.82	2.87	2.68	4.30	3.80	......
30	......	......	......	......	......	3.28	2.84	2.84	2.63	4.20	3.60	......
31	......	......	......	......	......	......	2.84	2.81	......	4.10	......	......

NOTE.— Daily gage heights, July 15 to 28 and August 7 to September 17, computed from hourly gage heights from the portable automatic gage. Remaining gage heights are means of two observations per day.

Current-meter Discharge Measurements of Mohawk River at Vischer's Ferry, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
July 2 *a*	G. J. Lyon	3.15	797	10	0.2,0.6&0.8	826	776	1,572
July 16 *a*	Lyon & Easterly	2.98	797, 764	10	0.2 & 0.8	753	760	954
Aug. 7 *a*	Lyon & Barnes	2.86	797, 897	5	0.2 & 0.8	439	726	668
Sept. 5 *a*	De Golyer & Barnes	2.64	877, 897	5	0.2,0.8&0.6	311	559	315
Sept. 11 *a*	Lyon & Barnes	2.85	797, 897	5	0.2 & 0.8	609	728	590
Nov. 5 *a*	De Golyer & Barnes	3.40	912, 897	10	0.2 & 0.8	1,020	809	2,070
Nov. 7 *a*	De Golyer & Barnes	3.51	912, 882	10	0.2 & 0.8	1,080	827	2,250
Nov. 18 *a*	Canfield & Barnes	4.20	877, 897	10	0.2,0.8&0.6	1,760	884	4,420

a Made by wading about 1,000 feet below gage.

Current-meter Discharge Measurements of Erie Canal at Vischer's Ferry, N. Y.

DATE.	Hydrographer.	a Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
July 8	W. S. Easterly	2.35	764	5	0.2 & 0.8	463	58.7	**415**
July 15	W. S. Easterly	2.10	764	5	0.2 & 0.8	471	58.7	**384**
Sept. 11	R. S. Barnes	1.76	797	2.5	0.2 & 0.8	514	59.5	**385**
Oct. 15	C. S. De Golyer	1.46	912	5	0.2 & 0.8	542	58.5	**366**
Oct. 15	C. S. De Golyer	1.42	912	5	0.2 & 0.8	538	58.5	**290**
Nov. 5	R. S. Barnes	3.27	897	5	0.2 & 0.8	496	59.0	**300**
Nov. 7	R. S. Barnes	3.58	882	5	0.2 & 0.8	499	59.0	**270**
Nov. 18	R. S. Barnes	1.29	897	5	0.2 & 0.8	541	59.0	**354**

a Distance to water-surface from a reference point on left abutment of bridge No. 48.

Mean Daily Discharge, Second-feet, of Mohawk River at Vischer's Ferry, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	......	......	......	......	1,370	611	540	986	2,230	2,980
2	......	......	......	......	......	......	1,220	740	462	900	2,380	4,760
3	......	......	......	......	......	......	1,170	630	509	940	1,950	5,110
4	......	......	......	......	......	......	900	722	478	1,170	2,060	4,420
5	......	......	......	......	......	......	900	820	331	2,120	1,840	3,280
6	......	......	......	......	......	......	986	740	478	1,820	1,630	2,670
7	......	......	......	......	......	......	780	630	462	1,470	2,230	7,380
8	......	......	......	......	......	......	860	574	494	1,470	1,520	6,980
9	......	......	......	......	......	......	880	556	400	722	2,230	10,700
10	......	......	......	......	......	......	940	840	478	1,060	......	5,470
11	......	......	......	......	......	......	760	685	593	840	......	5,470
12	......	......	......	......	......	......	685	630	556	722	......	4,090
13	......	......	......	......	......	......	666	593	525	900	9,840	4,420
14	......	......	......	......	......	......	525	574	462	920	7,380	4,420
15	......	......	......	......	......	......	703	611	447	760	7,780	6,590
16	......	......	......	......	......	......	940	666	860	780	6,590	5,110
17	......	......	......	......	......	......	860	630	611	880	5,110	5,470
18	......	......	......	......	......	......	760	648	560	860	4,090	3,600
19	......	......	......	......	......	......	740	431	520	820	4,090	3,440
20	......	......	......	......	......	......	722	540	478	900	5,470	2,380
21	......	......	......	......	......	......	703	611	386	1,240	12,000	2,230
22	......	......	......	......	......	......	703	556	648	9,420	10,300	2,380
23	......	......	......	......	......	......	703	685	462	6,590	7,780	2,170
24	......	......	......	......	......	1,060	760	509	1,820	5,110	5,110	2,010
25	......	......	......	......	......	703	740	540	1,400	3,440	4,090	2,520
26	......	......	......	......	......	1,550	722	574	780	3,760	5,110	2,090
27	......	......	......	......	......	940	703	611	760	6,590	3,760	1,410
28	......	......	......	......	......	740	648	574	1,220	7,780	3,440	1,260
29	......	......	......	......	......	1,680	593	685	372	4,760	3,130	1,810
30	......	......	......	......	......	1,630	630	630	303	4,420	2,520	1,900
31	......	......	......	......	......	......	630	574	......	4,090	......	2,140
Mean	......	......	......	......	......	1,190	803	626	613	2,520	9,410	3,890

NOTE.— No allowance made for diversion through Erie canal.

Monthly Discharge of Mohawk River at Vischer's Ferry, N. Y.
[Drainage area, 3,420 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
July	1,370	525	803	0.235	0.27
August	820	431	626	0.183	0.21
September	1,820	303	613	0.179	0.20
October	9,420	722	2,520	0.737	0.85
November	....	1,520	9,410	2.75	3.07
December	10,700	1,260	3,890	1.14	1.31

NOTE.— Discharge, November 10 to 12, estimated for purpose of completing monthly estimates. Estimates do not include the flow in the Erie canal passing this station.

ALPLAUS KILL.

ALPLAUS KILL NEAR CHARLTON, N. Y.

This gaging station is located at the highway bridge about one-half mile southwest of the village of Charlton. The drainage area at this point is 24.9 square miles.

A Gurley electric water stage register has been installed at this station. An auxiliary staff gage is also used in conjunction with the electric gage. A low weir 43 feet long has been constructed under the bridge between its abutments. It is built of 2-inch plank with its crest carefully planed, and extends about 2.6 feet above the bed of the stream. Near the center of this weir is a notch, 36 inches long and 9 inches deep, for low water flow. A steel plate forms the crest of this notch. In the center of this rectangular weir is a " V " notch, having a top width of 6 inches and the sides sloping at an angle of 60 degrees.

Current-meter discharge measurements are made by wading below the weir or from the bridge.

Mean Daily Gage Height, in Feet, of Alplaus Kill near Charlton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	......	......	......	......	......	......	10.29	10.48	10.82	11.50
2	......	......	......	......	......	......	......	......	10.22	10.50	10.62	11.53
3	......	......	......	......	......	......	......	......	10.15	10.76	10.61	11.46
4	......	......	......	......	......	......	......	......	10.08	10.60	10.95	11.41
5	......	......	......	......	......	......	......	......	10.03	10.51	10.66	11.36
6	......	......	......	......	......	......	......	......	9.98	10.50	10.92	11.31
7	......	......	......	......	......	......	......	......	9.92	10.52	10.72	11.44
8	......	......	......	......	......	......	......	......	9.86	10.49	10.80	11.64
9	......	......	......	......	......	......	......	......	9.78	10.54	11.62	11.41
10	......	......	......	......	......	......	......	......	9.71	10.60	11.78	11.41
11	......	......	......	......	......	......	......	......	9.65	10.47	11.50	......
12	......	......	......	......	......	......	......	9.36	9.59	10.41	11.42	......
13	......	......	......	......	......	......	......	9.26	9.53	10.46	11.36	......
14	......	......	......	......	......	......	......	10.32	9.47	10.48	11.40	......
15	......	......	......	......	......	......	......	10.07	9.41	10.51	11.39	......
16	......	......	......	......	......	......	......	9.69	9.36	10.56	11.37	11.42
17	......	......	......	......	......	......	......	9.33	9.32	10.48	11.32	11.41
18	......	......	......	......	......	......	......	9.12	9.32	10.38	11.24	11.38
19	......	......	......	......	......	......	......	......	9.30	10.37	11.22	11.17
20	......	......	......	......	......	......	......	......	9.27	......	11.71	11.05
21	......	......	......	......	......	......	......	8.69	9.24	......	11.52	11.03
22	......	......	......	......	......	......	......	8.66	10.45	......	11.45	11.16
23	......	......	......	......	......	......	......	8.90	10.72	10.96	11.42	10.89
24	......	......	......	......	......	......	......	8.79	10.63	10.70	11.38	11.00
25	......	......	......	......	......	......	......	8.80	10.57	10.84	11.36	11.06
26	......	......	......	......	......	......	......	8.75	10.49	11.32	11.26	11.15
27	......	......	......	......	......	......	......	9.14	10.52	11.45	11.27	10.91
28	......	......	......	......	......	......	......	9.30	10.50	11.29	11.10	11.16
29	......	......	......	......	......	......	......	9.48	10.48	11.16	11.06	11.28
30	......	......	......	......	......	......	......	10.26	10.49	11.16	11.31	11.34
31	......	......	......	......	......	......	......	10.40	......	10.95	......	11.18

NOTE.— Daily gage heights are mean of 24 hourly gage heights for each day. No water passed over weir when the gage height was below 10.00.

Current-meter Discharge Measurements of Alplaus Kill near Charlton, N. Y.

DATE.	Hydrographer.	GAGE READING.			Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.	Volumetricly measured discharge.
		Beginning.	Ending.	Mean.						
1913.					Feet.		Sq. ft.	Feet.	Sec.-ft.	Sec.-ft.
Oct. 18	Covert & Hartwell	......	......	10.444	......	......	......	......	......	0.174
Oct. 18	Covert & Hartwell	......	......	10.440	......	......	......	......	......	0.174
Oct. 18	Covert & Hartwell	......	......	10.403	......	......	......	......	......	0.141
Oct. 18	Covert & Hartwell	......	......	10 402	......	......	......	......	......	0.139
Oct. 18	Covert & Hartwell	......	......	10.367	......	......	......	......	......	0.112
Oct. 18	Covert & Hartwell	......	......	10.368	......	......	......	......	......	0.115
Oct. 18	Covert & Hartwell	......	......	10.342	......	......	......	......	......	0.0923
Oct. 18	Covert & Hartwell	......	......	10 343	......	......	......	......	......	0.0937
Oct. 18	Covert & Hartwell	......	......	10.336	......	......	......	......	......	0.0885
Oct. 18	Covert & Hartwell	......	......	10.305	......	......	......	......	......	0 0695
Oct. 18	Covert & Hartwell	......	......	10.307	......	......	......	......	......	0.0707
Oct. 18	Covert & Hartwell	......	......	10.287						0.059
Oct. 18	Covert & Hartwell	......	......	10.272	......	......	......	......	......	0.0511
Oct. 18	Covert & Hartwell	......	......	10.276	......	......	......	......	......	0.052
Dec. 16 *a*	C. S. De Golyer	11.44	11.44	11.44	1	0.2 & 0.8	22.6	27	18.94	......
Dec. 31 *a*	R. S. Barnes	11.43	11.42	11.42	2	0.2 & 0.8	19.44	27	18.74	......
Dec. 31 *b*	R. S. Barnes	11.42	11.42	11.42	5	Ice	63.04	42	18.77	......

a Made by wading 150 feet below gage. *b* Made by wading 100 feet above gage.

Mean Daily Discharge, Second-feet, of Alplaus Kill near Charlton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	......	......	......	......	......	......	0.060	0.327	2.75	27.30
2	......	......	......	......	......	......	......	......	0.029	0.916	1.12	30.80
3	......	......	......	......	......	......	......	......	0.011	2.210	1.05	22.90
4	......	......	......	......	......	......	......	......	0.002	0.980	4.04	18.00
5	......	......	......	......	......	......	......	......	0.000	0.460	1.40	14.00
6	......	......	......	......	......	......	......	......	0.000	0.413	3.74	10.70
7	......	......	......	......	......	......	......	......	0.000	0.510	1.88	20.90
8	......	......	......	......	......	......	......	......	0.000	0.369	2.57	45.20
9	......	......	......	......	......	......	......	......	0.000	0.616	42.40	18.00
10	......	......	......	......	......	......	......	......	0.000	0.980	66.40	18.00
11	......	......	......	......	......	......	......	......	0.000	0.288	27.30	18.00
12	......	......	......	......	......	......	......	0.000	0.000	0.149	18.90	18.00
13	......	......	......	......	......	......	......	0.000	0.000	0.251	14.00	18.00
14	......	......	......	......	......	......	......	0.078	0.000	0.327	17.10	18.00
15	......	......	......	......	......	......	......	0.002	0.000	0.460	16.30	18.00
16	......	......	......	......	......	......	......	0.000	0.000	0.730	14.70	18.90
17	......	......	......	......	......	......	......	0.000	0.000	0.327	11.30	18.00
18	......	......	......	......	......	......	......	0.000	0.000	0.122	7.41	15.50
19	......	......	......	......	......	......	......	0.000	0.000	0.114	7.15	6.55
20	......	......	......	......	......	......	......	0.000	0.000	*a*0.110	55.50	5.13
21	......	......	......	......	......	......	......	0.000	0.000	*a*0.110	29.60	4.91
22	......	......	......	......	......	......	......	0.000	0.217	*a*0.110	21.90	6.43
23	......	......	......	......	......	......	......	0.000	1.880	4.140	18.90	3.44
24	......	......	......	......	......	......	......	0.000	1.190	1.710	15.50	4.58
25	......	......	......	......	......	......	......	0.000	0.790	2.940	14.00	5.24
26	......	......	......	......	......	......	......	0.000	0.369	11.300	8.00	6.31
27	......	......	......	......	......	......	......	0.000	0.510	21.900	8.50	3.64
28	......	......	......	......	......	......	......	0.000	0.413	9.500	5.72	6.43
29	......	......	......	......	......	......	......	0.000	0.327	6.430	5.24	9.00
30	......	......	......	......	......	......	......	0.045	0.369	6.430	10.70	12.60
31	......	......	......	......	......	......	......	0.140	......	4.040	......	6.67
Mean	......	......	......	......	......	......	......	0.0132	0.206	2.560	15.20	14.50

NOTE.— Record was started on August 12, 1913; there was practically no discharge from August 12 to 29, inclusive and from September 5 to 21, inclusive. *a* Estimated.
Leakage not included in daily discharge; this was less than 0.1 second-foot.

Monthly Discharge of Alplaus Kill near Charlton, N. Y.
[Drainage area, 24.9 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
August	0.14	0.000	0.0132	0.0005	0.000
September	1.88	0.000	0.206	0.008	0.01
October	21.90	*a*0.11	2.56	0.103	0.11
November	66.4	1.05	15.20	0.613	0.68
December	45.2	3.44	14.5	0.582	0.67

a Estimated.

MOHAWK RIVER AT TRIBES HILL, N. Y.

This gaging station, which is located at the suspension bridge over the Mohawk river between Fort Hunter and Tribes Hill, was established April 3, 1904, by E. A. Lamb of this Department in coöperation with the U. S. Weather Bureau. The gage was formerly a vertical board attached to the downstream end of the north abutment of the suspension bridge. A standard box-and-chain gage is now used.

The elevation of bench-mark, marked " U. S. Weather Bureau Tablet No. 13," set in second course of the northeast anchorage of this bridge, is 295.021. Observations of the stage of the stream were taken twice each day during 1913.

Current-meter measurements are taken from the downstream side of the suspension bridge, which is 535.6 feet long between abutments. The channel of the river is straight for some distance each way from the bridge, and the cross-section directly under the bridge and below the bridge is quite uniform. About 300 feet above the bridge rapids are formed during low water, the river being shallow and having a rough and stony bed.

This gaging station is located about 1,000 feet below the junction of the Mohawk river and Schoharie creek, and the record here will show the combined discharge of these streams.

Beginning in 1907 the conditions at this station have been modified by construction work for the Barge canal, in progress near by. The calculated discharge for these years is approximate only.

Current-meter Discharge Measurements of Mohawk River at Tribes Hill, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.	Velocity correction factor.	Corrected discharge.
		Beginning.	Ending.	Mean.								
1913.						*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*		*Sec.-ft*
Mar. 24	C. S. De Golyer....	.....	.....	7.70	896	20	0.2 & 0.8	3,810	512	....	3.36	12,800
Mar. 24	C. S. De Golyer....	.....	.....	7.62	896	20	0.2 & 0.8	3,690	512	....	3.33	12,300
Mar. 28	Covert & Newton..	.....	.....	15.04	700	10	Sur. vel.	7,750	533	....	15.04	75,900
April 24	C. S. De Golyer....	.....	.....	5.93	896	10	0.2 & 0.8	3,280	513	....	5.93	4,590
May 3	R. S. Barnes.......	.....	.....	5.72	897	10	0.2 & 0.8	3,180	512	....	1.33	4,240
May 10	R. S. Barnes.......	.....	.....	5.00	897	10	0.2 & 0.8	2,900	511	....	0.81	2,340
May 21	Robbins & Fogarty.	4.35	4.43	4.39	360	10	0.6	2,691	512	1,503	......	....
June 12	C. C. Covert.......	.....	.....	4.48	797	10	0.2 & 0.8	2,600	511	....	0.54	1,400
June 13	O. W. Hartwell....	.....	.....	4.40	882	10	0.2 & 0.8	2,480	512	....	0.42	1,030
Aug. 25	Leggett & Wallace..	3.87	3.87	3.87	360	10	0.6	2,370	512	209	......	....
Sept. 25	Leggett & Bantrell.	4.55	4.53	4.54	360	10	0.6	2,660	512	1,613	......	....

MOHAWK RIVER AT LITTLE FALLS, N. Y.

A gaging station was established at the lower (Gilbert's) dam at Little Falls, N. Y., for the United States Board of Engineers on Deep Waterways in 1898. It was maintained by the U. S. Geological Survey in coöperation with this Department from 1900 to June, 1907, inclusive, when it was taken over by this Department. The dam is of masonry, having the form of a circular arc, and furnishes power for the Astoronga Knitting Mill and the mill of the Little Falls Paper Company. Records of the crest gage and run of the water-wheels at the Astoronga mill were taken by Edward Hagerty during 1913. At the paper mill a record has been kept, beginning June 1, 1907, by C. V. Barrett.

There are three dams at Little Falls. The upper one is a State dam, diverting water for the supply of the Erie canal; the lower two are used for water-power development. The gage record kept at the lower dam shows the amount of water flowing downstream from Little Falls, but does not include the diversion at the State dam above the gaging station, and hence does not represent the total yield from the tributary drainage area of about 1,306 square miles.

Mean Daily Discharge, Second-feet, of Mohawk River at Little Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	5,802	4,375	2,068	8,355	2,406	*2,600	a	a	556	427	1,800	2,203
2	4,223	*2,850	*1,672	6,833	2,455	2,885	a	a	326	726	*1,353	2,338
3	4,661	3,130	1,271	5,565	1,985	2,519	a	a	204	1,808	1,866	2,126
4	7,721	3,187	1,339	5,145	*1,601	2,118	a	a	247	1,615	1,465	2,010
5	*6,640	2,698	1,647	7,487	2,021	1,905	a	a	169	*883	1,857	2,095
6	8,593	2,460	1,271	*7,094	1,581	1,634	a	a	38	1,140	1,477	2,159
7	9,069	1,951	944	5,510	1,720	1,462	a	474	*263	1,005	1,339	*1,890
8	10,937	2,196	1,086	4,560	1,677	*905	a	408	296	764	1,232	5,289
9	10,627	*1,932	*1,027	3,806	1,381	532	a	368	231	810	*4,849	4,232
10	8,377	2,067	3,170	3,480	1,234	a	a	*418	829	579	11,118	3,347
11	6,810	1,999	3,630	6,196	*823	a	a	477	177	672	4,347	2,631
12	*7,755	2,055	4,229	7,864	1,236	a	a	502	185	*637	3,916	2,303
13	6,826	2,100	5,356	*6,017	1,097	a	a	370	518	524	3,574	2,195
14	5,619	2,096	8,922	4,993	1,216	a	a	385	*257	728	3,309	*2,359
15	6,816	2,330	12,372	4,452	1,131	a	a	542	177	624	3,163	2,448
16	4,542	*1,988	*13,474	3,957	1,068	a	a	391	192	731	*2,678	2,188
17	8,282	2,198	9,390	3,806	977	a	a	*208	181	576	3,497	2,127
18	11,279	2,035	5,286	3,241	*487	a	a	430	254	375	3,585	2,237
19	*12,840	2,245	4,910	4,084	842	a	a	488	311	*632	4,501	1,767
20	10,387	2,751	5,460	*3,969	720	a	a	326	508	3,031	4,493	1,352
21	10,807	3,118	7,159	3,559	655	a	a	303	*570	2,452	4,311	*1,514
22	10,098	2,885	10,028	3,244	874	a	a	280	1,254	4,684	3,259	1,708
23	7,501	*3,407	*7,180	3,107	2,492	a	a	362	2,121	2,942	*3,006	1,368
24	7,498	3,167	6,190	2,753	4,009	a	a	*292	1,247	2,173	2,681	926
25	6,839	2,627	12,990	2,812	*2,600	a	a	493	787	2,879	2,631	1,346
26	*5,496	2,086	26,008	2,601	1,833	a	a	470	577	*3,481	2,297	1,199
27	5,087	1,780	32,373	*2,402	1,808	a	a	737	678	3,402	2,046	646
28	4,225	2,246	27,481	2,561	3,333	a	a	750	*637	1,979	1,818	*865
29	3,531	......	14,258	2,735	7,230	a	a	896	540	2,064	1,711	1,682
30	3,651	......	*9,265	2,602	a	a	a	993	533	1,991	*1,663	1,196
31	3,930	......	6,982	......	a	......	a	*715	......	1,747	......	1,281
Mean	7,305	2,499	8,014	4,494	1,810	......	......	483	495	1,551	3,028	2,033

a No record. * Sunday.

Monthly Discharge of Mohawk River at Little Falls, N. Y.
[Drainage area, 1,306 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	12,840	3,531	7,305	5.59	6.44
February	4,375	1,780	2,499	1.91	1.99
March	32,373	944	8,014	6.14	7.08
April	8,355	2,402	4,494	3.44	3.84
May	7,230	487	1,810	1.39	1.60
June	....	....	....	....	....
July	....	....	....	....	....
August	993	208	483	0.37	0.427
September	2,121	38	495	0.379	0.423
October	4,684	375	1,551	1.19	1.37
November	11,118	1,232	3,028	2.32	2.59
December	5,289	632	2,033	1.56	1.79

MOHAWK RIVER AT FLOYD AVENUE, ROME, N. Y.

A box-and-chain gage was erected by E. F. Weeks, of this Department, at Riverside bridge crossing Mohawk river near Rome, July 9, 1907. The gage is attached to the upstream hand-rail near the left-hand end of the bridge. The gage reads from zero to 7.5 feet. The standard chain length is 18.98 feet and the elevation of water-surface, when the gage reads zero, is 445.16. Readings are taken each morning and afternoon by G. G. Williams. A bench-mark located at the junction of the upstream wing wall and left-hand abutment is at elevation 460.80. The channel is straight for some distance upstream and downstream from the bridge. Current-meter measurements are made on the downstream side, the initial point being the face of the right-hand abutment. A crude dam or barrier of boulders has been placed across the stream a few hundred feet downstream for the purpose of raising the water-level to produce an ice pond.

Owing to ice obstruction, it is believed that the record for winter months may be excessive, but the record is otherwise good.

Mean Daily Discharge, Second-feet, of Mohawk River at Floyd Ave., Rome, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	835	1,460	340	2,100	280	370	465	340	230	230	280	230
2	880	1,460	230	2,100	280	370	465	340	230	230	165	230
3	1,020	1,510	242	1,510	280	370	432	310	205	230	150	192
4	1,212	1,510	230	150	280	400	465	310	230	230	192	158
5	1,260	1,460	192	1,165	280	416	465	280	230	230	230	150
6	1,385	1,460	180	1,094	280	432	465	280	230	230	230	150
7	1,460	1,460	230	1,165	230	400	465	280	230	230	230	150
8	1,385	1,460	230	1,165	230	400	465	280	230	230	230	140
9	1,410	1,460	230	1,118	230	416	432	280	230	230	400	140
10	1,410	1,460	230	1,165	180	400	432	280	230	230	280	130
11	1,560	1,410	355	1,165	150	416	465	280	205	230	180	130
12	1,360	1,360	481	1,165	150	416	465	280	205	205	165	130
13	1,360	1,360	432	1,165	150	416	465	255	205	230	150	120
14	1,310	1,310	280	1,165	145	400	465	255	205	230	180	130
15	1,260	1,260	295	1,118	145	400	432	255	205	205	205	130
16	1,360	1,260	230	1,118	135	400	465	230	192	230	165	120
17	1,385	1,260	230	1,118	130	400	465	255	180	230	180	130
18	1,510	1,310	242	1,070	130	432	465	255	205	230	180	130
19	1,560	1,285	230	1,070	130	400	432	280	192	230	158	130
20	1,510	1,212	230	1,070	130	400	432	280	180	230	150	130
21	1,460	1,165	242	1,070	130	400	416	280	180	242	192	130
22	1,460	1,165	230	1,118	140	400	400	255	180	192	230	130
23	1,460	1,165	230	1,070	150	400	400	280	165	180	230	120
24	1,560	1,165	255	1,070	150	400	370	255	165	230	230	130
25	1,560	740	465	995	150	432	370	255	180	230	180	130
26	1,560	690	650	340	140	465	340	280	230	230	230	130
27	1,560	610	1,610	340	150	465	340	242	230	230	230	130
28	1,510	400	2,100	340	150	465	340	230	230	205	205	130
29	1,510	......	2,100	340	180	465	355	230	230	230	230	130
30	1,510	......	2,100	280	370	465	340	230	230	255	230	140
31	1,460	......	2,100	......	370	......	355	230	......	255	......	130
Mean	1,388	1,244	562	1,031	194	414	423	270	209	227	210	141

Monthly Discharge of Mohawk River at Floyd Ave., Rome, N. Y.
[Drainage area, 158 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	1,560	835	1,388	8.78	10.12
February	1,510	400	1,244	7.87	8.20
March	2,100	180	562	3.56	4.10
April	2,100	150	1,031	6.53	7.29
May	370	130	194	1.23	1.42
June	465	370	414	2.62	2.92
July	465	340	423	2.68	3.09
August	340	230	270	1.71	1.97
September	230	165	209	1.32	1.47
October	255	180	227	1.44	1.66
November	400	150	210	1.32	1.47
December	230	120	141	0.892	1.03

SCHOHARIE CREEK DRAINAGE BASIN.

DESCRIPTION OF BASIN.

The source of Schoharie creek is about two miles east of Tannersville, at an elevation of 1,940 feet. The source is within about four miles of the easterly escarpment of the Catskill plateau. The stream valley is broad and the slope moderate throughout the upper regions. A small area, which apparently was formerly tributary to Schoharie creek, has been cut off by erosion and has thus become tributary to Kaaterskill. Nearly the entire drainage basin is irregular and precipitous. It is extensively covered with second-growth forests.

The basin of Schoharie creek is largely overlaid by slaty rocks, into which water percolates only to a slight depth. The valley soil is largely thin plastic clay, formed by disintegration of the native rocks. Passing from the head waters toward the mouth, Schoharie creek crosses successively the Devonian sedimentary rocks, chiefly of the Catskill, Oneonta, Ithaca and Hamilton formations. All of these may be considered fairly impervious and free from fissures. It then crosses belts of Silurian formations, including Helderberg, Salina, Niagara and Medina sandstone and limestone. These rocks are underlaid by impervious Hudson river shales, but are themselves permeable, yielding numerous springs at the lower partings.

The entire drainage basin is shown on the topographic maps of the U. S. Geological Survey, the elevation and area at different points along the stream being as follows:

*Drainage Area of Schoharie Creek.**

LOCATION.	DISTANCE IN MILES.†			Elevation.	FALL IN FEET.		DRAINAGE AREA IN SQUARE MILES.	
	From mouth.	From Prattsville.	Place to place.		Place to place.	Per mile.	Point to point.‡	Total
Reservoir site........	64.0	0.0	......	1,240	......	....	228.0	228.0
Prattsville gage......	62.5	1.5	1.5	1,160	80	53.3	10.4	238.4
Devasego Falls......	60.5	3.5	2.0	1,100	60	30.0	8.1	246.5
Gilboa..............	55.5	8.5	5.0	1,000	100	20.0	58.5	305.0
North Blenheim......	48.5	15.5	7.0	800	200	22.3	92.9	397.9
Breakabeen.........	43.0	21.0	5.5	710	90	16.4	23.8	421.7
Middleburg.........	35.0	29.0	8.0	620	90	11.2	105.7	527.4
Schoharie..........	29.5	34.5	5.5	590	30	5.5	26.6	554.0
Mouth of Fox creek...	28.0	36.0	1.5	585	5	3.3	90.5	644.5
Above Cobleskill creek	24.0	40.0	4.0	580	5	1.2	12.8	657.3
Mouth of Cobleskill...	24.0	46.0	0.0	580	0	....	135.9	793.2
Esperance..........	18.0	46.0	6.0	560	20	3.3	63.2	856.4
Burtonville.........	14.5	49.5	3.5	520	40	11.4	14.0	870.4
Mill Point bridge.....	6.0	58.0	8.5	340	180	21.1	30.3	900.7
Mouth (Ft. Hunter)..	0.0	64.0	6.0	280	60	7.5	8.6	909.3

* From U. S. Geological Survey topographic maps. Measured along general course of stream. ‡ From head.

The results of gagings of this stream at stations formerly maintained may be found in the report of the State Engineer and Surveyor for 1902, supplement, pages 169–180.

Schoharie Creek at Fort Hunter, N. Y.

A gage was erected on Schoharie creek above the State feeder dam at Fort Hunter, November 17, 1904, by C. A. Poole, of this Department. The gage is maintained in coöperation with the U. S. Weather Bureau. The gage is attached to the downstream wing wall of the right-hand abutment of the West Shore R. R. bridge. It is vertical and divided to feet and tenths and is in two sections, the lower section reading from zero to 3.9, the upper section reading from 3.9 to 16 feet. The zero mark is at elevation 280.5. Readings are taken at 8 a. m. and 6 p. m. each day.

Mean Daily Estimated Inflow, Second-feet, from Schoharie Creek to Mohawk River at Fort Hunter, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	2,612	945	945	3,230	2,320	945	25	25	25	25	396	1,277
2.....	2,010	744	1,277	2,612	1,773	744	25	25	25	25	320	1,518
3.....	1,903	649	841	2,179	1,277	744	25	25	25	25	254	1,163
4.....	7,123	580	473	1,906	945	560	25	25	25	473	138	945
5.....	4,063	396	190	2,040	945	560	25	25	25	320	57	945
6.....	3,072	396	25	1,906	744	396	25	25	25	138	25	841
7.....	6,915	254	25	1,645	744	254	25	25	25	30	25	1,051
8.....	13,702	254	25	1,397	560	254	25	25	25	25	25	2,466
9.....	9,307	138	25	1,163	560	254	25	25	25	25	5,143	1,518
10.....	5,521	89	744	1,163	396	254	25	25	25	25	19,499	1,163
11.....	3,072	57	1,773	2,466	396	138	25	25	25	25	12,424	945
12.....	2,763	30	1,163	3,555	396	138	25	25	25	25	4,773	945
13.....	2,320	25	744	3,072	245	57	25	25	25	25	2,915	744
14.....	2,040	25	1,163	2,763	254	25	25	25	25	25	1,906	744
15.....	1,773	25	8,410	2,320	254	25	25	25	25	25	1,645	945
16.....	1,518	25	6,105	1,969	138	25	25	25	25	190	1,518	744
17.....	1,645	25	4,063	1,645	138	25	25	25	25	25	1,397	945
18.....	5,330	25	2,915	1,397	138	25	25	25	25	25	1,163	744
19.....	4,238	25	1,773	1,163	138	25	25	25	25	25	841	560
20.....	3,072	25	1,163	1,163	57	25	25	25	25	25	1,051	560
21.....	3,230	25	3,072	945	57	25	25	25	25	4,413	841	560
22.....	3,072	25	2,612	945	57	25	25	25	25	1,518	649	396
23.....	2,763	25	2,320	945	30	25	25	25	25	1,051	1,051	396
24.....	2,320	25	3,722	744	1,277	25	25	25	744	473	945	396
25.....	2,040	25	9,535	744	1,518	25	25	25	320	138	945	254
26.....	1,773	25	14,753	744	1,397	25	25	25	25	1,277	744	254
27.....	1,645	25	25,303	560	1,051	25	25	25	25	2,915	744	138
28.....	1,518	25	19,377	560	744	89	25	25	25	2,612	560	57
29.....	1,397	......	7,331	3,230	945	25	25	25	25	1,518	560	57
30.....	1,163	......	4,591	3,230	945	25	25	25	25	945	841	25
31.....	945	......	3,891	.....	744	......	25	25	......	649	......	25
Mean...	3,416	176	4,205	1,778	684	193	25	25	59	614	2,113	752

Note.— 25 second-feet for leakage have been added to each mean daily discharge in the above table.

Estimated Monthly Inflow from Schoharie Creek into Mohawk River at Fort Hunter, N. Y.
[Drainage area, 909 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	13,702	945	3,416	3.76	4.34
February	945	[a]25	176	0.193	0.201
March	25,303	[a]25	4,205	4.63	5.34
April	3,555	560	1,778	1.96	2.19
May	2,320	30	684	0.753	0.868
June	945	[a]25	193	0.212	0.236
July	[a]25	[a]25	25	0.028	0.032
August	[a]25	[a]25	25	0.028	0.032
September	744	[a]25	59	0.065	0.072
October	4,413	[a]25	614	0.675	0.778
November	19,499	[a]25	2,113	2.32	2.59
December	2,466	[a]25	752	0.827	0.953

[a] Estimated leakage, no overflow.

SCHOHARIE CREEK AT MIDDLEBURG, N. Y.

A temporary gaging station was established at Middleburg, August 24, 1906, by Robert E. Horton for this Department. The gage consists of an enameled steel scale subdivided to hundredths of a foot, which is attached vertically to a pile forming part of the shore protection on the right-hand bank of the stream, about 300 feet below Middleburg bridge. The zero mark of the gage is 27.6 feet below the top of the iron rod at the upper end of the pile. The stream channel is straight for a considerable distance below and above the gage. The bed is of gravel and cobblestones fairly smooth and permanent. The stream is confined near the right bank during low water and measurements are made by boat or by wading opposite the gage. At ordinary high stages the stream can be measured from the Middleburg bridge. Gage readings are taken each morning and night by Minnie E. Wheeler.

Mean Daily Gage Height, in Feet, of Schoharie Creek at Middleburg, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	3.25	2.90	3.50	4.25	2.90	2.62	1.18	0.70	0.70	1.05	2.15	2.55
2	2.88	2.40	2.98	3.68	2.72	2.50	1.12	0.70	0.70	1.12	2.05	2.38
3	2.98	2.32	2.52	3.48	2.58	2.25	1.05	0.70	0.70	2.12	1.98	2.30
4	4.80	2.38	2.40	3.32	2.38	2.35	1.00	0.70	0.70	1.85	1.85	2.30
5	3.75	2.25	2.35	3.70	2.28	2.20	1.00	0.70	0.70	1.62	1.82	2.30
6	3.62	2.25	2.32	3.28	2.10	2.05	0.95	0.70	0.70	1.48	1.75	2.25
7	5.00	2.25	2.00	3.15	2.10	1.95	0.95	0.70	0.70	1.38	1.72	2.32
8	7.50	2.25	1.98	2.85	2.00	1.92	0.95	1.20	0.70	1.30	1.65	2.88
9	4.82	2.20	1.92	2.80	1.95	1.80	0.90	1.00	0.65	1.28	8.75	2.55
10	3.95	2.12	2.82	2.68	1.88	1.75	0.90	0.88	0.65	1.30	7.75	2.48
11	3.88	2.00	3.00	3.35	1.80	1.70	0.90	0.85	0.68	1.25	4.75	2.38
12	4.55	2.05	2.90	3.80	1.75	1.65	0.88	0.80	0.65	1.25	3.95	2.25
13	3.45	1.90	2.65	3.45	1.70	1.68	0.90	0.80	0.65	1.48	3.68	2.30
14	3.22	2.12	4.40	3.62	1.65	1.48	0.95	0.75	0.60	1.52	3.32	2.32
15	3.02	1.98	4.55	3.25	1.60	1.40	0.90	0.70	0.60	1.42	3.20	2.28
16	2.95	1.90	4.15	3.05	1.60	1.35	0.90	0.70	0.60	1.32	3.00	2.15
17	3.35	1.92	3.40	2.88	1.62	1.30	0.85	0.70	0.60	1.30	2.95	2.10
18	4.00	2.02	3.00	2.70	1.60	1.25	0.85	0.70	0.60	1.30	2.90	2.08
19	4.00	1.88	3.08	2.60	1.55	1.20	0.85	1.12	0.60	1.30	2.98	1.92
20	3.50	1.75	3.00	2.58	1.50	1.22	0.80	0.92	0.60	1.35	3.25	1.80
21	4.25	1.92	4.00	2.38	1.50	1.35	0.85	0.82	0.60	3.75	3.05	1.88
22	3.40	2.18	3.95	2.30	1.52	1.32	0.80	0.80	0.90	2.78	2.82	1.78
23	3.20	3.15	3.18	2.20	2.05	1.20	0.80	0.80	2.40	2.20	2.70	1.72
24	3.60	2.78	3.52	2.25	3.65	1.15	0.75	0.75	1.80	2.18	2.68	1.88
25	3.20	2.85	3.55	2.18	2.90	1.20	0.80	0.75	1.55	2.25	2.60	1.90
26	2.98	2.48	6.10	2.02	2.58	1.95	0.75	0.70	1.38	3.77	2.52	1.92
27	2.88	1.95	10.55	1.98	2.40	1.60	0.75	0.70	1.28	3.82	2.48	1.88
28	2.75	3.75	7.60	2.45	2.75	1.35	0.75	0.70	1.20	3.12	2.35	2.08
29	2.50	......	5.20	4.25	4.00	1.32	0.75	0.70	1.15	2.78	2.32	1.95
30	2.55	......	4.50	3.38	3.25	1.25	0.75	0.70	1.10	2.58	2.72	1.82
31	2.55	......	4.02	......	2.85	......	0.75	0.70	......	2.38	......	1.75

Current-meter Discharge Measurement of Schoharie Creek at Middleburg, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
1913. June 26	Leggett & Fogarty...	1.80	1.80	1.80	360	*Feet.* 5	0.6	*Sq. ft.* 571	*Feet.* 146	*Sec.-ft.* 418

Mean Daily Discharge, Second-feet, of Schoharie Creek at Middleburg, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1,665	1,184	2,000	3,160	1,184	900	122	20	20	83	540	83
2.....	1,156	704	1,286	2,245	999	790	107	20	20	107	483	686
3.....	1,286	652	812	1,968	854	602	83	20	20	525	444	634
4.....	4,080	686	704	1,765	686	669	66	20	20	384	384	634
5.....	2,355	602	669	2,280	618	570	66	20	20	284	373	634
6.....	2,175	602	652	1,698	510	483	53	20	20	227	338	602
7.....	4,480	602	456	1,530	510	431	53	20	20	191	326	652
8.....	*a*	602	444	1,129	456	418	53	130	20	164	294	1,156
9.....	4,130	570	418	1,074	431	362	40	66	16	156	*a*	833
10.....	2,685	525	1,102	950	395	338	40	37	16	164	*a*	768
11.....	2,558	456	1,320	1,800	362	314	40	33	18	147	3,990	686
12.....	3,640	483	1,184	2,430	338	294	37	26	16	147	2,685	602
13.....	1,935	406	925	1,935	314	304	40	26	16	227	2,245	634
14.....	1,632	525	3,400	2,175	294	227	53	23	12	246	1,765	652
15.....	1,355	444	3,640	1,665	274	200	40	20	12	209	1,600	618
16.....	1,252	406	3,000	1,390	274	182	40	20	12	173	1,320	540
17.....	1,800	418	1,870	1,156	284	164	33	20	12	164	1,252	510
18.....	2,770	470	1,320	974	274	147	33	20	12	164	1,184	496
19.....	2,770	395	1,425	876	255	130	33	107	12	164	1,286	418
20.....	2,000	338	1,320	854	236	138	26	45	12	182	1,665	362
21.....	3,160	418	2,770	686	236	182	33	29	12	2,355	1,390	395
22.....	1,870	555	2,685	634	246	173	26	26	40	1,049	1,102	350
23.....	1,600	1,530	1,565	570	483	130	26	26	704	570	974	326
24.....	2,140	1,049	2,035	602	2,210	115	23	23	362	555	950	395
25.....	1,600	1,129	2,070	555	1,184	130	26	23	255	602	876	406
26.....	1,286	768	6,920	470	854	431	23	20	191	2,392	812	418
27.....	1,156	431	*a*	444	704	274	23	20	156	2,472	768	395
28.....	1,024	2,355	*a*	747	1,024	182	23	20	130	1,495	669	496
29.....	790	......	4,920	3,160	2,770	173	23	20	115	1,049	652	431
30.....	833	......	3,560	1,835	1,665	147	23	20	100	854	999	373
31.....	833	......	2,808	......	1,129	......	23	20	......	686	......	338
Mean...	2,067	689	1,975	1,425	711	320	43	31	80	587	1,120	557

a Beyond limit of rating curve.

Monthly Discharge of Schoharie Creek at Middleburg, N. Y.

[Drainage area, 527 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	*a*4,480	790	2,067	3.92	4.52
February	2,355	338	689	1,31	1.36
March	*a*6,920	418	1,975	3.75	4.32
April	3,160	444	1,425	2.70	3.01
May	2,770	236	711	1.35	1.56
June	900	115	320	0.607	0.68
July	122	23	43	0.082	0.095
August	130	20	31	0.059	0.68
September	704	12	80	0.152	0.17
October	2,472	83	587	1.11	1.28
November	*a*3,990	294	1,120	2.12	2.36
December	1,156	326	557	1.06	1.22

a Actual maximum beyond limit of rating curve.

SCHOHARIE CREEK AT PRATTSVILLE, N. Y.

Schoharie creek above Prattsville drains a rugged, mountainous area, almost entirely wooded. The watershed, 238 square miles in extent, lies wholly within Greene county. Rocks of the Catskill formation, chiefly sandstones and conglomerates, lie at or near the surface over most of the area. The basin is surrounded by nearly continuous mountain ranges, and intervening ridges divide the main stream from its principal tributaries — Batavia kill, East kill and West kill.

The gaging station was established November 7, 1902, by Robert E. Horton for the U. S. Geological Survey in coöperation with the New York Water Supply Department, on the highway bridge at Prattsville. It was assumed and continued by the Board of Water Supply of the city of New York on May 7, 1907, at which time a new standard Board of Water Supply chain gage was installed. The old datum was preserved and the present readings conform to those already obtained.

The gage is attached to the floor of the bridge on the upstream side near the left bank. The chain length is 27.05 feet. The elevation of the datum of the gage is 1,130.03 (U. S. G. S. B. M.). The gage datum is referred to a bench-mark — a circle of white paint marked on a boulder at the right end of the downstream side of the bridge, elevation 1,151.00, or 20.97 above the datum of the gage.

Gage readings are made each morning and evening by Miss Edna M. Snyder of Prattsville, N. Y.

The bridge is a single span steel highway bridge, 187.8 feet between abutments, and all the water passes between them at all but the very highest stages.

In high water measurements are made from the bridge, while in low water stages they may be made by wading at a point about 500 feet below the bridge.

Mean Daily Discharge, Second-feet, of Schoharie Creek at Prattsville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	774	385	662	1,360	782	391	55	9	25	71	421	546
2.....	567	361	481	906	616	361	51	9	22	385	361	511
3.....	1,880	361	463	830	490	301	47	5	19	421	313	483
4.....	1,976	349	361	702	409	483	37	17	19	289	295	457
5.....	1,230	331	313	933	361	349	39	15	17	207	237	445
6.....	1,070	325	277	694	331	252	43	15	15	167	237	421
7.....	1,170	307	252	623	325	227	47	136	15	143	227	497
8.....	4,618	331	421	553	277	191	45	55	31	127	195	862
9.....	1,868	289	494	497	212	171	39	39	19	130	10,916	750
10.....	1,290	207	331	433	203	151	43	35	13	118	5,050	609
11.....	1,230	183	630	718	191	133	37	35	11	112	2,298	497
12.....	1,592	159	397	1,050	171	127	35	23	9	159	1,568	464
13.....	822	133	313	822	163	118	37	19	11	247	1,230	464
14.....	662	121	1,748	846	151	97	47	31	9	175	1,070	457
15.....	630	100	1,580	686	143	103	35	19	11	159	915	445
16.....	581	163	1,310	595	151	73	29	19	15	151	862	385
17.....	1,090	143	814	525	133	73	27	19	7	136	806	391
18.....	1,090	127	623	457	143	88	29	118	11	115	774	397
19.....	990	112	581	427	127	53	31	47	11	112	846	391
20.....	766	112	766	415	112	59	29	35	9	1,544	1,050	433
21.....	1,200	183	1,230	361	112	63	23	39	11	1,628	806	307
22.....	702	337	1,230	301	118	53	25	35	990	838	718	313
23.....	638	445	766	289	203	53	25	39	464	574	670	325
24.....	870	183	1,140	277	970	49	25	37	242	470	623	337
25.....	638	242	1,010	252	525	43	25	35	163	870	505	325
26.....	567	127	5,350	212	385	151	19	23	124	1,868	588	373
27.....	581	163	11,056	191	331	73	19	19	112	1,592	511	511
28.....	470	457	3,726	1,496	497	69	23	19	85	1,030	470	525
29.....	409	......	2,102	1,748	1,010	82	19	43	82	1,774	694	313
30.....	415	......	1,520	1,060	638	53	17	39	71	616	646	203
31.....	391	......	1,520	......	483	......	11	29	......	504	......	183
Mean...	1,057	241	1,402	675	347	150	33	34	88	507	1,200	439

Monthly Discharge of Schoharie Creek at Prattsville, N. Y.

[Drainage area, 233 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January..........................	4,618	391	1,057	4.48	5.165
February..........................	457	100	241	1.02	1.064
March..........................	11,056	252	1,402	5.94	6.851
April..........................	1,748	191	675	2.86	3.192
May..........................	1,010	112	347	1.47	1.698
June..........................	483	43	150	0.64	0.709
July..........................	55	11	33	0.14	0.163
August..........................	136	5	34	0.14	0.169
September..........................	990	7	88	0.37	0.416
October..........................	1,868	71	507	2.15	2.478
November..........................	10,916	195	1,200	5.08	5.671
December..........................	862	183	439	1.86	2.143

EAST CANADA CREEK.

Drainage Areas of East Canada Creek.

(From U. S. G. S. Topographic Maps.)

LIMITS.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	Total.
EAST CANADA CREEK.				
Above Oregon	40.13	....	....	40.13
Oregon to junction with North creek	10.42	....	....	50.55
North Creek.				
Source to junction with East Canada creek	18.60	....	18.60	69.15
EAST CANADA CREEK.				
Junction with North creek to junction with Trammel creek	8.63	....	....	77.78
Trammel Creek.				
Source to junction with East Canada creek	12.04	....	....	89.82
EAST CANADA CREEK.				
Junction with Trammel creek to junction with Ayers creek (Stratford)	0.20	....	....	90.02
Ayers Creek.				
Source to junction with East Canada creek	13.63	....	....	103.65
EAST CANADA CREEK.				
Junction with Ayers creek (Stratford) to Emmonsburg	8.05	....	....	111.70
Emmonsburg to junction with Big Sprite creek	15.68	....	....	127.38
Big Sprite Creek.				
Source to Stewart landing	40.90	....	....	....
Stewart landing to junction with East Canada creek	7.87	....	48.77	176.15
EAST CANADA CREEK.				
Junction with Big Sprite creek to junction with Middle Sprite creek	3.70	....	....	179.85
Middle Sprite Creek.				
Source to junction with East Canada creek	22.65	....	....	202.50
EAST CANADA CREEK.				
Junction with Middle Sprite creek to junction with Spruce creek	0.20	....	....	202.70
Spruce Creek.				
Source to dam at Diamond Hill	36.20	36.20	....	....
Dam at Diamond Hill to Salisbury	13.08	49.28	....	....
Salisbury to junction with East Canada creek	1.20	....	50.48	252.98
EAST CANADA CREEK.				
Junction with Spruce creek to lower bridge, Dolgeville	0.60	....	....	253.48
Lower bridge, Dolgeville, to High Falls	3.64	....	....	257.22
High Falls to junction with Gillett creek	0.84	....	....	258.06
Gillett Creek.				
Source to junction with East Canada creek	10.92	....	....	268.98
EAST CANADA CREEK.				
Junction with Gillett creek to Ingham Mills	8.73	....	....	277.71
Ingham Mills to Beardslee falls	3.60	....	....	281.31
Beardslee falls to mouth	0.30	....	....	281.61

EAST CANADA CREEK AT DOLGEVILLE, N. Y.

A gaging station on this stream was established for the U. S. Board of Engineers on Deep Waterways in 1898. It was maintained by the U. S. Geological Survey in coöperation with this Department from 1900 to June, 1907, inclusive, when it was taken over by this Department.

Observations are taken at High Falls, near Dolgeville, about 7 miles from the outlet of the stream. The gaging station is located at the dam of the Herkimer County Light and Power Company. The dam is of rubble masonry, 19 feet high, and has a flat crest 6 feet wide and 190.25 feet long between abutments. The elevation of upstream edge of the crest is 1 foot below that of the lip. The impounded water is conducted to the power-house, 500 feet below the dam, through a wrought-iron flume, 10 feet in diameter.

Readings of the depth on the crest are taken from a vertical gage board attached to the bulkhead, 6 feet upstream, twice each day by Godfrey Aman. The mean of the readings is used in computing the discharge. A record is also kept of the run of the water-wheels and the elevation of water in the tail-race. The record since January 1, 1903, has been computed from a discharge curve based on the United States Geological Survey experiments on a full-sized model of the dams, made at Cornell University. The flow through the turbines for this period has also been computed from current-meter measurements, made in the tail-race of the electric power-plant instead of from the manufacturer's rating tables for the water-wheels, as formerly. The turbines are of a special Victor cylinder-gate type. The two main wheels are each 36 inches in diameter, and their speed is controlled by Lombard governors. Beginning November 12, 1907, a pair of 36-inch Rodney Hunt turbines have also been in use.

Spruce creek, the principal tributary of East Canada creek, enters 1 mile above Dolgeville, and drains an area of 50 square miles. Water is diverted from this creek and from Beaver creek, one of the tributaries, at Diamond Hill, and is carried to Little Falls through a cast-iron conduit 9 miles long. The water-supply of Dolgeville is taken from Cole brook, a tributary of East Canada creek. No allowance for diversion of water-supply has been made in computing the run-off for East Canada creek.

Mean Daily Discharge, Second-feet, of East Canada Creek at Dolgeville, N. Y.

DAY.	Jan.*a*	Feb.	Mar.	April.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	*a*	335	1,694	391	900	109	100	75	101	330	348
2	......	*a*	230	1,596	391	751	136	92	86	252	273	379
3	......	*a*	329	1,069	323	539	145	71	82	368	284	368
4	......	*a*	349	1,074	285	354	137	77	78	253	300	433
5	......	*a*	346	1,280	296	316	109	80	85	174	336	453
6	......	219	346	1,351	311	288	95	80	85	182	353	387
7	......	195	286	1,068	257	274	95	79	80	143	328	561
8	......	152	289	844	190	145	123	75	83	150	215	655
9	......	410	254	559	190	132	159	80	80	135	1,530	674
10	......	302	358	487	240	197	139	75	80	109	1,763	528
11	......	215	429	573	144	200	176	75	75	142	990	399
12	......	227	522	1,420	178	232	162	71	80	113	932	502
13	......	217	544	1,280	205	226	157	85	123	134	804	571
14	......	10	1,135	1,154	175	146	170	80	58	156	462	420
15	......	175	3,651	677	195	100	121	10.	80	204	326	345
16	......	105	3,338	559	205	167	137	75	80	138	825	328
17	......	200	1,853	523	209	176	113	71	71	119	563	360
18	......	243	1,586	402	138	125	191	71	109	111	457	322
19	......	243	1,184	663	207	143	105	71	100	113	398	243
20	......	243	1,950	1,221	210	176	105	71	90	284	1,399	190
21	......	243	2,996	1,124	162	185	90	71	99	668	1,377	285
22	......	231	4,199	1,284	292	146	90	90	355	759	1,276	244
23	......	218	2,264	1,288	436	106	95	205	227	405	578	200
24	......	305	1,960	594	1,816	175	105	109	209	359	469	243
25	......	324	6,801	359	1,366	117	109	80	155	552	440	209
26	......	288	9,283	368	1,113	135	116	100	160	975	428	209
27	......	282	9,732	296	559	217	206	167	132	908	274	132
28	......	341	6,722	424	447	226	145	131	109	613	424	86
29	......	......	3,319	458	3,355	118	180	200	109	505	326	177
30	......	......	1,990	424	1,583	124	105	127	105	431	198	209
31	......	......	1,765	......	946	......	91	105	......	447	......	170
Mean	......	234	2,269	868	541	239	129	93	111	323	622	343

a Datum uncertain.

Monthly Discharge of East Canada Creek at Dolgeville, N. Y.

[Drainage area, 256 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January *a*	....	....	....	....	....
February	410	10	234	0.914	0.952
March	9,732	230	2,269	8.86	10.22
April	1,694	296	868	3.39	3.78
May	3,355	138	541	2.11	2.43
June	900	100	239	0.933	1.04
July	206	90	129	0.504	0.581
August	205	71	93	0.364	0.42
September	355	71	111	0.433	0.483
October	975	109	323	1.26	1.45
November	1,763	198	622	2.43	2.71
December	674	86	343	1.34	1.54

a Gage datum uncertain.

WEST CANADA CREEK DRAINAGE BASIN.

DESCRIPTION OF BASIN.

West Canada creek rises in West Canada lakes, in southwest-central Hamilton county, and flows southwestward, then southeastward into the Mohawk at Herkimer, N. Y.

The drainage area is shown on the Utica, Little Falls, Remsen, Wilmurt, Old Forge and Canada lakes quadrangles, U. S. Geological Survey topographic map.

There are about fifty small lakes and a few undrained ponds in the watershed of the stream. Most of these are situated near the head water and above the gaging station, the largest single water-surface being Honnedaga lake, 1.4 square miles in extent. There is also a small amount of controllable storage, in reservoirs formed by three dams. Swamps and marshes are numerous in the region of the head waters, usually adjoining lakes and tributaries and having an extent of one-half square mile or less each.

Much of the region above Twin Rock is timber-covered. There are extensive sand areas in the central and upper drainage basins. The soil of the upper watershed is underlaid by granite gneiss usually at or near the surface, excepting in alluvial valleys. From a point just above Twin Rock bridge and extending downstream beyond Trenton Falls, the underlying geological formation is Trenton limestone.

Compacted snow accumulates in the woodlands in winter, often to a depth of three or four feet, and representing an inch of water for each five or six inches of snow. This melts slowly, feeding the stream in March and April, which months may show a run-off greatly exceeding the precipitation.

*Drainage Area of West Canada Creek.**

DIVISIONS OF AREA.	AREA IN SQUARE MILES.		
	Place to place.	Sub-total.	Total.
West Canada creek lakes, source to outlet of Mud lake	18.05	......	18.05
West Canada creek, foot of lakes to Swanson dam	28.77	......	46.82
West Canada creek, Swanson dam to ½ mile below Metcalf brook	46.82	......	93.04
Honnedaga lake, above outlet	5.40	5.40	......
Honnedaga brook, foot of lake to mouth	11.90	17.30	......
Honnedaga lake and brook, total, source to mouth	......	17.30	110.94
West Canada creek, Honnedaga lake outlet to junction with south branch (Nobleboro)	30.46	......	141.40
South branch, West Canada creek, above Mountain House (Remonda)	34.40	34.40	......
South branch, West Canada creek, Mountain House to mouth at Nobleboro	19.25	53.65	......
South branch, West Canada creek, total, source to mouth	......	53.65	......
West Canada creek, total to Nobleboro, including south branch	......	......	195.05
West Canada creek, Nobleboro (junction N. and S. branches) to Wilmurt	2.58	......	......
West Canada creek, total above bridge at Wilmurt	....	......	197.63
Four-mile brook, total, source to mouth	....	26.17	......
West Canada creek, total at Wilmurt, including Four-mile brook	......	......	223.80
West Canada creek, Wilmurt to mouth of Black creek	36.92	......	......
West Canada creek, total to mouth of Black creek	......	......	260.72
Black creek, source through Hall Vly	8.40	8.40	......
Black creek, Hall Vly to Bennett's mill (first bridge above Gray)	16.30	24.70	......
Black creek, Bennett's mill to Gray	4.50	29.20	......
Black creek, Gray to first bridge below Gray	3.00	32.20	......
Mill creek, source through Cranberry lake and swamp	11.00	......	......
Mill creek, foot of Cranberry lake to junction N. Branch	6.20	17.20	......
Mill creek, total, source to mouth	......	17.20	......
North branch, Black creek, above contour 1,520 (Bull Hill road)	6.80	......	......
North branch, Black creek, Bull Hill road to junction, Mill creek	4.00	10.80	......
North branch, Black creek, junction, Mill creek, to mouth	0.85	11.65	......
North branch, Black creek, total to junction with Black creek	......	20.85	......
Black creek, total to first bridge below Gray	......	61.05	......
Black creek, first bridge below Gray to Mounts creek	0.17	61.22	......
Mounts creek, above Gray-Wilmurt road (Radley)	13.25	......	......
Mounts creek, Radley to mouth	2.10	......	......
Mounts creek, total, source to mouth	......	15.35	......
Black creek, mouth of Mounts creek to second bridge below Gray	1.55	......	......
Black creek, total to second bridge below Gray	......	78.12	......
Black creek, second bridge below Gray to third bridge	5.65	83.77	......
Black creek, third bridge below Gray to fourth bridge	12.35	96.12	......
Black creek, fourth bridge below Gray to fifth bridge (Pardeville)	4.00	100.12	......
Black creek, Pardeville to Grant	1.95	102.07	......
Black creek, Grant to mouth	1.15	103.22	......
Black creek, total, source to mouth	......	103.22	......
West Canada creek, total to mouth of and including Black creek	......	......	363.94
West Canada creek, mouth of Black creek to Twin Rock bridge	0.50	......	......
West Canada creek, total to Twin Rock bridge	......	......	364.44
West Canada creek, Twin Rock bridge to Hinckley dam	8.50	......	372.94
West Canada creek, Hinckley dam to Prospect	2.00	......	374.94
West Canada creek, Prospect to Trenton Falls	0.90	......	375.84
West Canada creek, Trenton Falls to Steuben creek	6.20	......	382.04
Steuben creek, total, source to mouth	52.30	......	434.34
West Canada creek, Steuben creek to Poland (first bridge below)	35.80	......	470.14
West Canada creek, Poland to Newport	10.00	......	480.14
West Canada creek, Newport to Middleville	47.20	......	527.34
West Canada creek, Middleville to Kast bridge	47.50	......	574.84
West Canada creek, Kast bridge to mouth	8.80	......	583.64
West Canada creek, total, source to mouth	......	......	583.64

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* Taken from U. S. Geological Survey topographic maps.

WEST CANADA CREEK AT KAST BRIDGE, NEAR HERKIMER, N. Y.

This gaging station, which is located on West Canada creek about four miles from its junction with the Mohawk river, was established May 15, 1905, by Robert E. Horton, hydrographer, U. S. Geological Survey. The station has since been maintained by this Department.

The gage is of the weight-and-reel type and is placed in a box secured to the north railing of bridge at first panel point from east abutment. The readings are taken by measuring down from a scale in the box to the water-surface by means of an iron weight suspended by graduated tape which is attached to the reel. The scale in box is one foot long, graduated to tenths and hundredths, with its zero at elevation 464.04. The end of weight used to locate the water-surface is 49.80 feet from zero of tape, which is graduated to feet. The elevation of bottom of weight, when zero of tape is opposite zero of scale, is, therefore, 414.24. The elevation of bench-mark on north end of bridge-seat of right-hand abutment is 458.02.

Observations are taken twice daily by Lloyd Kast.

Discharge measurements are made from the downstream side of the bridge, to which the gage tape is attached. The initial point for soundings is the top face of the left abutment, downstream side. The drainage area at this point is 574 square miles, or 58 per cent greater than at Twin Rock bridge.

Current-meter Discharge Measurements of West Canada Creek at Kast Bridge, N. Y.

DATE.	Hydrographer.	Gage Reading.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.	Velocity correction factor.	Corrected discharge.
		Beginning.	Ending.	Mean.								
1913.						*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*		*Sec.-ft.*
Mar. 28	Covert & Newton..	34.90	34.70	34 80	621	10	*	1,672	196	17,844	0.85	15,168
April 5	Robbins & Wallace.	31 85	31 98	31.92	360	5	0.6	1,108	196	6,350	......	....
June 9	Leggett & Fogarty..	28.54	28.64	28 59	360	5	0.6	460	196	732	......	....
Aug. 26	Lezgett & Wallace..	27.87	28.05	27.96	360	5	0.6	329	184	319	......	....
Oct. 29	Lezgett & Wallace..	29.56	29.52	29.54	462	5	0.6	626	195	1,500	......	....

* Subsurface.

Mean Daily Discharge, Second-feet, of West Canada Creek at Kast Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	2,050	1,385	797	6,160	1,070	1,980	285	366	252	230	942	968
2.....	1,560	1,070	708	4,242	1,120	1,560	304	290	138	351	730	1,222
3.....	2,326	1,095	628	3,029	968	1,248	309	257	165	866	767	993
4.....	4,676	1,070	760	2,970	811	968	267	276	230	737	767	968
5.....	3,684	774	636	6,160	730	797	197	323	143	511	891	1,140
6.....	5,516	745	606	5,280	701	708	370	267	170	442	723	993
7.....	5,748	636	533	3,501	577	737	197	197	204	446	752	1,455
8.....	7,609	708	621	2,326	687	643	361	248	138	262	701	4,304
9.....	6,703	658	584	1,700	621	548	219	299	173	356	4,180	2,832
10.....	4,180	737	1,172	1,490	475	504	366	223	194	309	9,068	2,280
11.....	3,285	730	1,248	3,808	453	475	489	182	162	309	6,100	1,490
12.....	4,676	752	1,700	4,552	461	456	456	238	100	465	3,560	1,197
13.....	3,442	723	1,989	3,324	418	342	409	257	136	418	2,418	1,248
14.....	2,786	680	7,147	2,188	446	389	380	208	135	394	2,096	1,197
15.....	2,142	701	7,276	2,418	351	257	257	167	101	338	2,096	1,248
16.....	1,875	723	8,998	1,910	453	370	252	200	182	267	1,805	968
17.....	7,476	665	5,922	1,805	437	428	215	130	170	295	1,350	1,044
18.....	8,015	621	3,324	1,248	451	380	276	165	138	267	1,172	1,070
19.....	8,575	603	2,786	2,059	591	304	248	194	230	328	1,070	694
20.....	6,169	658	2,783	1,910	504	370	230	176	230	614	4,304	591
21.....	8,365	767	5,922	1,490	451	497	230	170	295	4,676	5,160	694
22.....	7,084	891	9,351	1,274	606	446	248	154	636	3,206	3,147	752
23.....	4,552	1,989	6,220	1,350	2,418	418	271	280	993	1,700	2,096	651
24.....	4,800	1,350	5,280	1,248	3,206	314	342	351	606	1,140	1,770	636
25.....	3,684	1,140	14,377	1,350	2,464	323	428	295	409	1,840	1,630	730
26.....	2,558	942	20,500	1,274	1,324	295	356	219	342	2,418	1,274	752
27.....	2,740	789	20,500	1,420	1,630	446	295	276	356	2,326	1,095	409
28.....	1,735	847	18,355	1,120	2,464	570	304	257	252	1,770	942	446
29.....	1,172	......	8 295	1,274	6,703	465	323	394	165	1,248	942	606
30.....	1,140	......	4,920	2,924	3,684	314	331	237	262	1,120	968	591
31.....	1,197	......	6,520	......	2,188	.....	361	238	......	968	......	680
Mean...	4,242	874	5,498	2,560	1,273	585	310	244	257	988	2,150	1,124

Monthly Discharge of West Canada Creek at Kast Bridge, N. Y.
[Drainage area, 575 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	8,575	1,140	4,242	7.38	8.51
February	1,980	606	874	1.52	1.58
March	20,500	533	5,498	9.56	11.02
April	6,160	1,120	2,560	4.45	4.96
May	6,706	351	1,273	2.22	2.56
June	1,980	257	585	1.02	1.14
July	489	197	310	0.539	0.622
August	394	130	244	0.424	0.489
September	993	100	252	0.438	0.489
October	4,676	230	988	1.72	1.98
November	9,068	701	2,150	3.74	4.17
December	4,304	409	1,124	1.95	2.25

WEST CANADA CREEK AT POLAND, N. Y.

A gaging station was established by this Department on West Canada creek at the first highway bridge below the village of Poland, July 3, 1908. The gage is of the weight-and-chain variety, contained in a box of standard form, which is fastened to the hand railing of the downstream side of the bridge near the left-hand end. Length of chain from end of weight to copper river marker is 22.65 feet. The gage is read each morning and night by Harrison Fisher. Current-meter measurements obtained during 1908–1910 established a consistent rating curve for low stages of the stream. The accompanying discharge tables have been deduced by the use of this curve.

Mean Daily Gage Height, in Feet, of West Canada Creek at Poland, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	5.25	4.60	4.10	6.55	4.50	4.95	3.45	3.55	3.30	3.25	4.35	4.45
2.....	4.75	4.55	4.00	6.25	4.60	5.00	3.30	3.35	2.95	3.35	4.20	4.60
3.....	5.60	4.55	4.05	5.80	4.45	4.70	3.45	3.40	3.20	4.45	4.25	4.40
4.....	6.65	4.45	4.00	5.90	4.25	4.45	3.30	3.55	3.20	4.15	4.25	4.45
5.....	6.35	4.05	3.90	7.65	4.10	4.25	3.35	3.50	3.20	3.75	4.40	4.50
6.....	6.10	4.10	3.90	6.95	4.00	4.10	3.30	3.35	3.20	3.50	4.25	4.45
7.....	6.70	3.95	3.95	6.05	4.85	4.00	3.50	3.25	3.15	3.50	4.05	4.95
8.....	8.05	4.05	3.85	5.45	3.95	4.00	3.40	3.30	3.25	3.40	4.00	6.75
9.....	7.70	4.10	3.85	5.25	3.85	3.90	3.45	3.40	3.15	3.50	6.65	5.75
10.....	6.70	4.15	4.10	4.95	3.65	3.80	3.95	3.10	3.15	3.40	8.95	5.40
11.....	6.10	4.15	4.35	5.95	3.70	3.80	3.70	3.40	3.15	3.35	7.30	4.95
12.....	6.50	4.15	4.60	6.45	3.70	3.75	3.70	3.35	3.15	3.25	6.15	4.60
13.....	6.20	4.05	5.00	5.90	3.60	3.65	3.65	3.20	3.10	3.50	5.55	4.65
14.....	5.85	4.00	6.85	5.40	3.55	3.45	3.60	3.20	3.00	3.55	5.40	4.60
15.....	5.55	4.05	8.00	5.45	3.55	3.45	3.45	3.15	3.10	3.45	5.30	4.55
16.....	5.25	4.00	8.95	5.25	3.60	3.60	3.35	3.05	3.15	3.40	5.15	4.30
17.....	6.85	4.05	8.65	5.05	3.55	3.70	3.45	3.20	3.15	3.40	4.80	4.50
18.....	8.25	4.05	6.10	4.70	3.70	3.60	3.40	3.20	3.15	3.35	4.60	4.25
19.....	9.00	4.00	5.75	5.20	3.85	3.55	3.35	3.20	3.25	3.25	4.50	4.05
20.....	7.50	3.95	6.35	5.25	3.70	3.55	3.30	3.15	3.15	3.60	6.65	4.05
21.....	8.75	4.10	7.40	4.85	3.70	3.70	3.40	3.15	3.05	6.85	6.95	4.25
22.....	7.85	4.35	9.35	4.70	3.85	3.65	3.50	3.25	3.80	6.00	6.05	4.10
23.....	6.65	4.90	7.75	4.70	5.80	3.70	3.45	3.45	4.40	5.15	5.40	4.15
24.....	6.90	4.80	6.75	4.60	6.10	3.45	3.55	3.45	3.75	4.90	5.10	3.85
25.....	6.20	4.95	10.10	5.05	5.40	3.45	3.65	3.40	3.65	5.35	5.10	4.00
26.....	5.60	4.55	12.70	4.75	4.85	3.60	3.40	3.40	3.45	5.55	4.75	4.00
27.....	5.65	4.20	12.80	4.75	4.05	3.80	3.25	3.20	3.45	5.60	4.50	4.00
28.....	5.00	4.10	11.65	4.55	5.90	3.95	3.60	3.30	3.15	5.30	4.35	3.85
29.....	4.45	......	8.40	4.70	8.10	3.55	3.55	3.50	3.40	4.80	4.30	4.05
30.....	4.60	......	6.85	4.80	6.25	3.40	3.60	3.45	3.25	4.55	4.40	4.05
31.....	4.60	......	6.35	.....	5.40	......	3.55	3.35	......	4.40	.....	3.95

Current-meter Discharge Measurements of West Canada Creek at Poland, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
1913.						*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
April 5	Robbins & Wallace..	7.45	7.65	7.55	360	5	0.6	1,060	169.8	5,400
June 10	Leggett & Fogarty...	3.80	3.85	3.82	360	5	0.6	436	161.0	648
Aug. 26	Leggett & Wallace...	3.58	3.58	3.58	360	5	0.6	405	157.8	394
Oct. 27	Leggett & Wallace...	5.60	5.60	5.60	462	5	0.6	765	170.0	2,226

Mean Daily Discharge, Second-feet, of West Canada Creek at Poland, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	1,660	1,032	684	3,650	950	1,343	332	380	263	240	848	916
2	1,155	991	620	3,150	1,032	1,390	263	286	120	286	748	1,032
3	2,134	991	652	2,428	916	1,114	332	309	220	916	780	882
4	3,806	916	620	2,584	780	916	263	380	220	712	780	916
5	3,320	652	564	5,705	684	780	286	355	220	480	882	950
6	2,904	684	564	4,312	620	684	263	286	220	355	780	916
7	3,887	592	592	2,822	1,249	620	355	240	200	355	652	1,343
8	6,532	652	536	1,920	592	620	309	263	240	309	620	3,968
9	5,810	684	536	1,660	536	564	332	309	200	355	3,805	2,350
10	3,887	712	684	1,343	430	508	592	180	200	309	8,500	1,855
11	2,904	712	848	2,662	455	508	455	309	200	286	4,975	1,343
12	3,575	712	1,032	3,490	455	480	455	286	200	240	2,986	1,032
13	3,068	652	1,390	2,584	405	430	430	220	180	355	2,062	1,073
14	2,506	620	4,138	1,855	380	332	405	220	140	380	1,855	1,032
15	2,062	652	6,440	1,920	380	332	332	200	180	332	1,725	991
16	1,660	620	8,500	1,660	405	405	286	160	200	309	1,552	814
17	4,138	652	7,768	1,444	380	455	332	220	200	309	1,202	950
18	6,935	652	2,904	1,114	455	405	309	220	200	286	1,032	780
19	8,625	620	2,350	1,606	536	380	286	220	240	240	950	652
20	5,400	592	3,320	1,660	455	380	263	200	200	405	3,806	652
21	8,000	684	5,190	1,249	455	455	309	200	160	4,138	4,312	780
22	6,118	848	9,418	1,114	536	430	355	240	508	2,740	2,822	684
23	3,806	1,296	5,910	1,114	2,428	455	332	332	882	1,552	1,855	712
24	4,225	1,202	3,968	1,032	2,904	332	380	332	480	1,296	1,498	536
25	3,068	1,343	11,075	1,444	1,855	332	430	309	430	1,790	1,498	620
26	2,134	991	17,020	1,155	1,249	405	309	309	332	2,062	1,155	620
27	2,206	748	17,270	1,155	1,343	508	240	220	332	2,134	950	620
28	1,390	684	14,480	991	2,584	592	405	263	200	1,725	848	536
29	916		7,250	1,114	6,625	380	380	355	309	1,202	814	652
30	1,032		4,138	1,202	3,150	309	405	332	240	991	882	652
31	1,032		3,320		1,855		380	286	.....	882	......	592
Mean...	3,545	792	4,638	2,038	1,196	562	348	272	264	902	1,906	1,015

Monthly Discharge of West Canada Creek at Poland, N. Y.

[Drainage area, 470 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	8,625	916	3,545	7.54	8.69
February	1,343	592	792	1.68	1.75
March	17,270	536	4,638	9.86	11.37
April	3,650	991	2,038	4.34	4.84
May	2,904	380	1,196	2.54	2.93
June	1,343	309	562	1.19	1.33
July	592	240	348	0.74	0.853
August	380	160	272	0.579	0.668
September	882	120	264	0.562	0.627
October	4,138	240	902	1.92	2.21
November	8,500	620	1,906	4.06	4.53
December	3,968	536	1,015	2.16	2.49

WEST CANADA CREEK AT TRENTON FALLS, N. Y.

This gaging station, which is located at the dam of the Utica Gas and Electric Co., was established October 17, 1905, by C. A. Poole. The gage board is secured to face of dam in a vertical position and is placed above the water-surface, the readings being taken by means of chain and plumb-bob passing on pulley over top of gage. The observations are taken by placing plumb-bob at water-surface and reading the gage at a point marked on chain ten feet above plumb-bob. The elevation of zero of gage is 1,009.56, to which all readings are added. The gage is graduated in feet and inches and is read twice each day by C. W. Young.

The dam is of concrete with masonry coping and has a spillway 97.9 feet long. Another spillway or by-pass two feet lower than crest or main spillway allows the water to pass through a rock channel on each side of dam. The crest of this lower spillway is 163.4 feet long at an elevation of 1,007.12. The discharge over the two spillways has been calculated by means of the weir formula, using coefficients derived from the United States Geological Survey experiments.

The discharge diverted by the Power Company has been computed from diagrams expressing the flow as a function of the kilowatts used. These diagrams were made from tests made by the Power Company to determine the discharging capacity of the turbines, which are of a special design. These tests were made by computing the discharge over weirs placed in the tail-race.

A daily record is kept of the total kilowatts used in twenty-four hours, also the number of hours every day each turbine runs, there being four turbines in all.

The mean discharge has been calculated from each observation taken at the gage, thereby giving a mean for twelve hours, and the maximum and minimum discharges given in the accompanying table are, therefore, means for twelve hours and do not represent the highest or lowest flow of short duration.

The pondage above the Trenton Falls dam is very limited and the operation of the generators during low water has to be adjusted according to the condition of inflow. The inflow is controlled by pondage above Hinckley dam. Owing to irregularity of operation during low water, the Trenton Falls record is considered approximate only, for the low-water period.

Owing to the drawing down of the pond above the Trenton Falls dam, the average elevation of the water-surface in the pond is deduced from two daily readings, roughly approximate only. The pond level fluctuates often as much as 10 feet during 24 hours in the low-water season. In connection with the calculated discharge at Trenton Falls it may be stated that there are a variety of conditions which tend to make the results of calculations of discharge for that station somewhat too small, especially during low-water periods.

The drainage area at the point of gaging is 375.8 square miles.

Mean Daily Discharge, Second-feet, of West Canada Creek above Power Dam, Trenton Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1......	854	803	374	3,966	689	*1,301	215	215	77	158	675	510
2......	588	*537	*366	2,765	719	1,062	181	218	150	233	*577	530
3......	685	570	336	1,816	705	809	224	*154	132	698	472	415
4......	2,305	468	374	1,710	*562	654	169	235	131	463	503	446
5......	*2,551	362	362	3,884	431	520	146	197	120	*527	662	530
6......	2,381	316	338	*2,924	405	462	*141	177	117	281	495	476
7......	3,268	339	317	1,941	917	391	221	117	*103	242	420	*784
8......	3,948	379	338	1,386	381	*418	168	183	118	200	*a*	2,526
9......	3,869	*616	*761	1,174	318	353	266	203	129	233	*2,529	1,510
10......	2,674	475	357	1,056	260	312	363	*107	122	187	5,960	1,155
11......	1,738	499	392	1,442	*275	821	421	179	112	183	3,364	874
12......	*2,061	475	375	2,424	293	282	*267	157	109	*138	1,960	533
13......	1,876	425	574	*1,952	265	255	300	128	109	229	1,213	555
14......	565	389	1,424	1,337	270	208	243	128	*82	206	1,142	*620
15......	1,135	585	2,666	1,442	269	*201	198	121	123	195	1,207	471
16......	1,030	*573	*5,098	1,176	259	274	139	103	115	200	*930	419
17......	1,088	289	2,476	1,056	231	289	205	*115	110	174	847	500
18......	4,337	344	1,422	789	*254	282	222	118	122	185	606	475
19......	*6,107	350	1,038	1,086	284	226	202	116	172	*137	524	292
20......	3,586	364	1,241	*1,096	282	266	*133	109	187	345	2,099	282
21......	5,564	368	2,914	914	289	340	195	90	*120	3,010	2,852	*352
22......	6,629	370	4,164	792	284	*363	217	98	453	1,808	1,798	309
23......	2,360	*797	*3,368	846	1,729	273	213	206	741	990	*2,395	299
24......	2,450	814	1,470	693	2,185	239	278	*156	296	779	984	294
25......	1,955	599	5,948	1,172	*1,434	227	278	153	271	1,205	906	265
26......	*2,216	458	20,117	921	895	235	214	156	201	*1,499	700	276
27......	1,268	389	18,423	*890	945	361	*136	156	217	1,569	490	285
28......	777	385	16,900	688	2,089	417	244	174	*135	1,143	474	*193
29......	529	......	5,394	748	4,774	*329	245	171	198	903	423	292
30......	607	......	*2,953	1,122	2,343	229	274	197	167	736	*477	280
31......	605	......	2,239	......	1,280	......	256	**a*	......	699	......	291
Mean...	2,310	476	3,372	1,507	850	413	225	155	175	631	1,299	550

a No record. * Sunday.

Monthly Discharge of West Canada Creek above Power Dam, Trenton Falls, N. Y.
[Drainage area, 376 square miles.]

MONTH.	Discharge in Second-feet.				Run-off.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	6,629	529	2,310	6.14	7.08
February	814	289	476	1.27	1.32
March	20,117	317	3,372	8.97	10.34
April	3,966	688	1,507	4.01	4.47
May	4,774	231	850	2.26	2.61
June	1,301	201	413	1.10	1.23
July	421	133	225	0.598	0.689
August	235	90	155	0.412	0.475
September	741	77	175	0.465	0.519
October	3,010	137	631	1.68	1.94
November	5,960	420	1,299	3.45	3.85
December	2,526	193	550	1.46	1.68

WEST CANADA CREEK AT WILMURT, N. Y.

A gaging station was established at the highway bridge crossing West Canada creek at Wilmurt, on June 28, 1909, by this Department. A weight-and-chain gage reads in feet and tenths from zero to 8 feet. This is attached to the bridge on the downstream side. In addition, a 5-foot section, reading from 10 feet to 15 feet, is attached to a telegraph pole near the Flansburgh residence. The cross-section of the stream at the location of the gage is not favorable for purposes of measurement in low water. It can be utilized at certain stages of the stream and low-water measurements can be obtained at a more favorable cross-section located a short distance downstream. The observer is Louis Fagan, by whom gage readings are taken at 7 A. M. and 4 P. M. each day. This gaging station can be reached only by driving a distance of several miles from Prospect or Hinckley. The drainage area at the gaging station is 224 square miles. The gage is located above the limit of backwater from the proposed Hinckley reservoir, which is being constructed in connection with the State Barge canal.

Mean Daily Gage Height, in Feet, of West Canada Creek at Wilmurt, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	3.65	3.45	3.10	6.75	*a*	3.55	2.20	2.00	2.00	2.10	2.95	2.80
2	3.30	3.50	3.10	5.40	*a*	3.70	2.15	1.90	1.90	2.55	2.85	2.90
3	3.70	3.50	3.10	4.20	*a*	3.35	2.10	1.90	1.80	2.95	2.75	3.00
4	3.90	3.40	3.20	4.30	*a*	3.15	2.10	2.00	1.90	2.80	2.85	3.00
5	4.00	3.30	3.20	5.95	*a*	3.05	2.00	2.00	1.90	2.55	3.15	3.10
6	4.15	3.30	3.20	5.85	*a*	2.90	2.00	2.00	1.90	2.35	2.95	3.35
7	5.20	3.20	3.20	5.70	*a*	2.80	2.00	1.90	1.90	2.30	2.80	3.50
8	5.90	3.10	3.80	5.50	*a*	2.75	2.00	1.90	1.90	2.30	2.70	4.30
9	5.50	3.10	3.90	5.15	*a*	2.70	2.00	1.90	1.90	2.30	6.00	3.95
10	4.75	3.10	3.90	4.85	*a*	2.60	2.00	1.90	1.90	2.25	6.35	3.75
11	4.20	3.10	4.00	4.75	*a*	2.60	2.45	1.90	1.80	2.20	5.10	3.50
12	4.00	3.10	5.00	4.45	*a*	2.45	2.25	1.90	1.80	2.20	4.20	3.35
13	4.60	3.05	6.30	4.25	*a*	2.30	2.25	1.90	1.80	2.20	3.90	3.20
14	4.20	3.10	6.30	4.05	*a*	2.60	2.15	1.80	1.80	2.15	3.95	3.20
15	4.30	3.20	7.30	3.85	*a*	2.60	2.10	1.80	1.80	2.10	3.75	3.00
16	4.35	3.20	7.30	3.75	*a*	2.55	2.00	1.80	1.80	2.10	3.55	3.00
17	4.95	3.20	7.30	3.65	*a*	2.45	2.00	1.80	1.80	2.10	3.35	3.00
18	6.15	3.20	7.20	3.45	*a*	2.35	2.00	1.80	1.80	2.10	3.15	2.90
19	6.20	3.10	7.10	3.85	*a*	2.30	2.00	1.80	1.80	2.10	3.15	2.90
20	6.95	3.10	7.70	3.80	*a*	2.55	2.00	1.80	1.90	3.20	5.65	2.80
21	7.30	3.10	7.60	3.60	*a*	2.35	2.00	1.80	1.90	5.25	4.60	2.80
22	7.00	3.10	7.00	3.45	*a*	2.30	2.00	2.05	3.50	4.20	4.20	2.80
23	6.35	3.10	7.65	3.30	*a*	2.30	2.00	2.35	2.75	3.60	3.85	2.80
24	5.30	3.10	7.90	3.25	4.35	2.30	2.30	2.20	2.45	3.40	3.70	2.80
25	4.25	3.10	8.75	3.75	3.80	2.20	2.20	2.00	2.30	4.05	3.60	2.85
26	3.80	3.10	9.35	3.55	3.45	2.25	2.10	1.90	2.15	4.15	3.25	2.95
27	3.60	3.10	9.35	3.35	3.30	2.25	2.10	2.00	2.10	4.20	3.05	2.85
28	3.40	3.10	8.00	3.45	5.35	2.20	2.10	2.00	2.10	3.85	2.90	2.65
29	3.35	......	8.00	3.65	5.95	2.30	2.10	2.00	2.10	3.55	2.95	2.45
30	3.30	......	7.30	3.75	4.45	2.25	2.05	2.00	2.10	3.35	2.85	2.25
31	3.20	......	7.00	......	3.90	......	2.00	2.00	......	3.15	......	2.10

a No record.

Current-meter Discharge Measurements of West Canada Creek at Wilmurt, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean						
1913.						*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
April 3	Robbins & Wallace..	4.34	4.30	4.32	360	5	0.6	560	155.8	1,858
April 3	Robbins & Wallace..	4.22	4.15	4.18	360	5	0.6	529	155.8	1,655
June 11	Leggett & Fogarty...	2.57	2.55	2.56	360	5	0.6	270	150.3	308
Oct. 28	Leggett & Wallace..	3.80	3.80	3.80	462	5	0.6	466	153.0	1,098

Mean Daily Discharge, Second-feet, of West Canada Creek at Wilmurt, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	1,150	958	676	*a*	*a*	1,050	138	72	72	98	570	476
2	820	1,000	676	3,520	*a*	1,200	118	58	58	325	508	540
3	1,200	1,000	676	1,740	*a*	868	98	58	50	570	443	600
4	1,404	916	744	1,870	*a*	710	98	72	58	476	508	600
5	1,510	820	744	*a*	*a*	638	72	72	58	325	710	676
6	1,685	820	744	*a*	*a*	540	72	72	58	215	570	868
7	3,200	744	744	*a*	*a*	476	72	58	58	190	476	1,000
8	*a*	676	1,300	*a*	*a*	443	72	58	58	190	410	1,870
9	*a*	676	1,404	3,120	*a*	410	72	58	58	190	*a*	1,457
10	2,490	676	1,404	2,635	*a*	356	72	58	58	164	*a*	1,250
11	1,740	676	1,510	2,490	*a*	356	267	58	50	138	3,040	1,000
12	1,510	676	2,870	2,060	*a*	267	164	58	50	138	1,740	868
13	2,270	638	*a*	1,805	*a*	190	164	58	50	138	1,404	744
14	1,740	676	*a*	1,570	*a*	356	118	50	50	118	1,457	744
15	1,870	744	*a*	1,352	*a*	356	98	50	50	98	1,250	600
16	1,935	744	*a*	1,250	*a*	325	72	50	50	98	1,050	600
17	2,790	744	*a*	1,150	*a*	267	72	50	50	98	868	600
18	*a*	744	*a*	958	*a*	215	72	50	50	98	710	540
19	*a*	676	*a*	1,352	*a*	190	72	50	50	98	710	540
20	*a*	676	*a*	1,300	*a*	325	72	50	58	744	*a*	476
21	*a*	676	*a*	1,100	*a*	215	72	50	58	3,280	2,270	476
22	*a*	676	*a*	958	*a*	190	72	85	1,000	1,740	1,740	476
23	*a*	676	*a*	820	*a*	190	72	215	443	1,100	1,352	476
24	3,360	676	*a*	782	1,935	190	190	138	267	916	1,200	476
25	1,805	676	*a*	1,250	1,300	138	138	72	190	1,570	1,100	508
26	1,300	676	*a*	1,050	958	164	98	58	118	1,685	782	570
27	1,100	676	*a*	868	820	164	98	72	98	1,740	638	508
28	916	676	*a*	958	3,440	138	98	72	98	1,352	540	383
29	868	......	*a*	1,150	*a*	190	98	72	98	1,050	570	267
30	820	......	*a*	1,250	2,060	164	85	72	98	868	508	164
31	744	......	*a*	......	1,404	......	72	72	......	710	......	98
Mean	1,662	739	......	1,534	......	376	102	69	119	662	1,005	660

a Beyond limit of rating curve.

Monthly Discharge of West Canada Creek at Wilmurt, N. Y.

[Drainage area, 198 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	*b*3,360	820	1,662	8.39	9.67
February	1,000	676	739	3.73	3.88
March	*b*2,870	676	*a*	*a*	*a*
April	*b*3,520	782	1,534	7.75	8.65
May	*b*3,440	820	*a*	*a*	*a*
June	1,200	138	376	1.90	2.12
July	267	72	102	0.515	0.594
August	215	50	69	0.348	0.401
September	1,000	50	119	0.601	0.671
October	3,280	98	662	3.34	3.85
November	*b*3,040	410	1,005	5.08	5.67
December	1,870	98	660	3.33	3.84

a Indeterminate.
b Actual maximum beyond limits of rating curve.

NINE-MILE CREEK.

NINE-MILE CREEK NEAR STITTVILLE, N. Y.

A gaging station was established at Powell's bridge, one mile below the village of Stittville, November 4, 1905, by C. A. Poole. Observations of the stage of the stream are taken each morning and afternoon by Mrs. Raymer Powell, from a weight-and-chain gage attached to the bottom chord on the downstream side of the bridge.

Nine-Mile creek drains a large portion of the territory on the north side of the Mohawk between Utica and Rome, emptying into the latter stream near Oriskany. Its channel will be improved and used as a feeder for the diversion of water from West Canada creek to the summit level of the improved Erie canal, according to present plans. The drainage area above the station is 62.6 square miles.

A gaging station was maintained at this point by the U. S. Deep Waterways Commission during their survey in 1898. At that time there was a dam about 200 feet below the bridge, which has since been destroyed, leaving the flow unimpeded. The channel is of rock, of uniform cross-section and straight for several hundred feet each way from the bridge, and the conditions are favorable for current-meter discharge measurements, except in times of very low water. Measurements are made from the upstream side of the bridge.

Owing to the sluggish velocity at low stages the record for very low-water conditions is considered to be roughly approximate only.

Mean Daily Discharge, Second-feet, of Nine-Mile Creek near Stittville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	360	37	37	299	56	37	37	46	37	299	492	65
2	86	37	37	65	56	46	37	46	37	318	434	56
3	*a*	37	37	65	37	56	37	37	37	65	434	56
4	1,915	19	46	318	37	56	37	37	37	56	524	65
5	408	19	46	299	37	56	37	37	37	65	524	75
6	360	19	46	86	46	65	37	37	37	75	556	56
7	1,714	37	56	97	46	75	19	46	19	56	524	65
8	*a*	37	56	108	37	56	19	56	19	56	524	360
9	590	37	56	338	37	37	19	56	7	86	2,423	360
10	338	37	56	338	37	37	19	46	7	86	524	384
11	408	37	75	408	37	37	19	19	7	65	590	338
12	462	37	86	384	37	37	19	19	7	56	556	318
13	408	37	1,406	75	37	37	19	19	7	65	590	338
14	360	37	*a*	86	37	19	19	19	7	65	1,304	318
15	299	37	*a*	97	37	19	28	19	7	56	434	46
16	318	37	785	120	37	19	37	19	7	56	384	46
17	*a*	37	408	120	37	19	37	19	7	65	338	37
18	1,304	65	360	132	56	19	37	19	19	75	360	37
19	408	65	318	120	65	19	37	19	37	86	408	37
20	360	86	97	97	65	37	37	19	37	86	1,508	37
21	384	86	86	108	86	37	56	19	46	108	785	37
22	434	97	108	132	65	19	37	19	65	280	384	56
23	785	56	86	108	86	19	46	19	318	318	108	280
24	462	56	408	86	86	19	56	28	56	398	97	299
25	360	37	*a*	75	108	37	65	37	56	398	75	299
26	318	37	2,834	56	75	46	65	37	56	524	56	56
27	65	46	708	56	65	37	75	37	56	524	56	56
28	56	56	384	86	97	37	86	37	65	462	65	56
29	37	......	338	75	75	37	56	37	86	434	56	37
30	37	......	299	75	46	37	37	37	280	462	75	37
31	37	......	299	......	46	......	37	*b*	......	492	......	37
Mean	467	45	341	150	55	37	39	31	50	201	506	140

a Beyond limit of rating curve. *b* No record.

Monthly Discharge of Nine-Mile Creek near Stittville, N. Y.

[Drainage area, 59 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	*a*1,915	37	467	7.92	9.13
February	97	19	45	0.763	0.795
March	*a*2,834	37	341	5.78	6.66
April	408	56	150	2.54	2.83
May	108	37	55	0.932	1.07
June	75	19	37	0.627	0.70
July	86	19	39	0.661	0.762
August	56	19	31	0.525	0.605
September	318	7	50	0.847	0.945
October	524	56	201	3.41	3.93
November	2,423	56	506	8.58	9.57
December	384	37	140	2.37	2.73

a Actual maximum beyond limit of rating curve.

PRECIPITATION RECORDS.

Rain gages have been established by this Department at several places on the Mohawk drainage area. Precipitation records have been kept as follows:

Daily Precipitation, in Inches, at Tribes Hill, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1								0.70				
2										1.80		
3	0.90	0.60										
4			0.20	0.90				0.70	0.40		0.50	
5												
6												
7						0.30						0.90
8	2.10											0.40
9							0.60				2.60	
10			0.30					0.20				0.10
11	1.00	0.10		1.20								0.10
12				0.90			0.30			1.00		
13							0.40					
14			0.30								0.60	
15			0.80									
16					0.20							
17									0.30			
18	2.40				0.10				0.10	0.20		
19											1.80	
20			0.60			1.20	0.10			2.10		
21			0.10				0.10			0.30		
22		0.30						0.60	1.30			
23												0.50
24					1.80		0.70					
25			1.10							2.40		
26		0.20	0.60					0.10		1.80		0.60
27		0.20	2.00	0.20		0.10						
28	0.10			0.80	2.20	0.10	0.50			0.30	0.20	
29								1.00				
30												
31			0.30									
Total...	6.50	1.40	6.30	4.00	4.30	1.70	2.70	3.30	2.10	9.90	5.70	2.60

Daily Precipitation, in Inches, at Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1				0.11				1.00		0.19		
2		0.45				0.50		0.39		0.76		
3	0.41									0.54		
4	1.00	0.25		0.25				0.12	0.14		0.35	
5				0.10					0.15			
6	0.08		0.03				0.17					
7	0.65		0.12	0.33		0.10						0.20
8	0.85					0.18						0.45
9		0.11									0.97	0.12
10		0.08	0.30				0.43				1.03	
11	0.25		0.23	1.40							0.17	
12	0.56	0.15		0.11			0.05			0.35		0.33
13	0.14						0.13			0.10		
14			0.15				0.10					
15										0.09		
16	0.05				0.10	0.05						
17	0.44		0.32						0.05			
18	0.30								0.65			
19	0.08			0.58	0.35							
20	0.07					0.13				1.20	0.88	
21	0.09		0.16			0.30				0.79		0.02
22	0.31				0.70		0.45		2.20			0.05
23		0.18			1.20			0.60	0.05			
24		0.05	0.14		0.40		0.13					0.60
25			1.10				0.51			0.35		
26			1.70			0.38						1.15
27			0.55			0.16		0.59	0.04	0.16		
28		0.34	0.35	0.12	0.40	0.12	0.69			0.07		
29				0.25	0.55		0.85	0.80			0.33	
30												
31												
Total...	5.28	1.61	5.15	3.25	3.70	1.92	3.51	3.50	3.28	4.60	3.73	2.92

Daily Precipitation, in Inches, at No. 1 Reservoir, near Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	0.15	0.08		0.50						0.24		
2	0.02	0.02		0.30					1.20	0.26	0.18	
3		0.05	0.04	0.30		0.72			0.17			0.15
4		0.02								0.11		
5	0.08	0.03	0.01	0.40		0.32						
6	0.03	0.01							2.10			0.25
7		0.02				0.28			0.10		0.08	
8		0.05		0.17							1.86	0.05
9	0.25		0.11	0.05			0.34				0.08	0.09
10	0.04	0.03		0.33						0.31	0.10	
11	0.03		0.02							0.44		
12				0.03					0.51	0.05		
13			0.55	0.24		0.07					0.05	
14			0.04	0.03			0.36				0.65	
15	0.02		0.08	0.07					0.17		0.88	
16	0.03		0.35	0.04		0.13	0.09		0.57			0.09
17	0.04											
18	0.12			0.17							0.05	0.04
19	0.23			0.26			0.18		0.82	0.13		0.50
20	0.02	0.31		0.06		0.05			0.13	0.07		0.09
21			0.07			0.04			0.04			0.06
22		1.20	0.20				0.61					0.02
23	0.13	0.05	0.06	0.40								
24	0.05	0.05	0.25	0.04					1.25	0.90		
25	0.06		0.05	0.14					1.32	0.85	0.50	0.14
26	0.02								0.11	0.06	0.02	
27	0.02	0.85	0.15	0.04					0.09	0.04		
28		0.05										0.26
29		0.03	0.35				0.24		0.05			0.04
30	0.28		0.40	0.74			0.03		0.15			
31	0.05						0.02					0.16
Total	1.67	2.85	2.73	4.31	......	1.61	1.87	......	8.78	3.46	4.45	1.94

Daily Precipitation, in Inches, at No. 1 Reservoir, near Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1		0.03		0.15						0.04	0.02	
2		0.12				0.53		0.99		0.65		
3	0.10									0.66		0.10
4	0.40	0.27	0.10	0.09		0.04		0.30	0.52		0.25	
5	0.06	0.02	0.19	0.25					0.04			
6	0.21			0.02			0.22		0.03			
7	0.22		0.19	0.11		0.23	0.06	0.05				0.10
8	0.51		0.04	0.02		0.16						0.21
9	0.29	0.09		1.20							1.25	0.04
10		0.10		0.26			0.32	0.23			0.75	
11	0.18	0.02	0.25				0.05	0.20			0.02	0.04
12	0.23	0.12	0.02							0.35	0.06	
13	0.18	0.03					0.08			0.08		
14			0.17				0.05				0.13	
15										0.11	0.10	
16	0.02		0.13		0.12	0.12						
17	0.28	0.01	0.10									
18	0.32		0.04						0.52			
19	0.15			0.60						0.24		0.01
20	0.01			0.04	0.35	0.17				0.60	0.68	
21	0.31		0.08			0.45	0.06			1.25		
22		0.01					0.32		2.20			
23		0.12			0.45			0.40	0.45			
24			0.02	0.03	0.79		0.07					0.09
25	0.20		0.77		0.51		0.17			0.28	0.09	0.02
26			1.50							0.24		0.02
27	0.02	0.21	0.70			0.07		0.45	0.11	0.15	0.06	0.22
28	0.02	0.28	0.39	0.04	0.03	0.12	0.34			0.02		
29	0.05			0.28	0.42		0.76				0.11	
30	0.03				0.54			1.15		0.14		
31										0.04		
Total	3.79	1.43	4.69	3.09	3.21	1.89	2.50	3.77	3.47	4.85	3.52	1.45

Daily Precipitation, in Inches, at Savage Reservoir, near Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1....	......	0.03	......	0.39	......	......	......	......	......	0.04	0.01	......
2....	......	0.11	......	......	......	0.49	......	0.54	......	0.83	......	......
3....	0.10	......	0.02	......	......	......	......	......	......	0.51	0.02	0.10
4....	0.52	0.26	0.06	0.12	......	0.03	......	0.28	0.31	......	0.24	......
5....	0.03	0.03	0.16	0.35	......	......	......	0.01	0.13	......	0.05	......
6....	0.21	......	......	0.02	......	......	0.12	......	0.05	......	......	......
7....	0.42	......	0.14	0.06	......	0.20	0.06	0.05	......	......	......	0.27
8....	0.62	......	0.03	0.03	......	......	......	......	......	......	......	0.24
9....	0.15	0.06	......	......	......	0.18	......	......	0.02	......	1.50	0.03
10....	......	0.13	0.02	......	......	......	0.36	0.17	......	......	0.63	......
11....	0.23	0.05	0.28	1.35	......	......	0.07	0.25	......	......	0.02	0.05
12....	0.24	0.09	0.03	0.26	......	......	......	......	......	0.32	0.06	......
13....	0.14	0.06	......	......	......	......	0.14	......	......	0.10	......	......
14....	......	......	0.18	......	0.02	......	0.08	......	0.02	......	0.17	......
15....	......	......	......	......	......	......	......	......	......	0.11	0.08	......
16....	0.02	......	0.19	......	0.10	0.08	......	......	......	......	0.02	......
17....	0.35	0.01	0.10	......	......	......	......	......	0.02	......	......	......
18....	0.41	......	0.03	......	......	......	0.01	......	0.53	0.02	......	......
19....	0.14	......	......	0.68	0.29	......	......	......	0.04	0.21	......	0.01
20....	0.19	......	......	0.05	......	0.18	......	......	......	0.86	0.68	......
21....	0.37	......	0.07	......	......	0.39	0.02	......	......	1.05	......	0.04
22....	......	0.02	0.02	......	0.51	......	0.20	......	2.45	0.08	0.04	......
23....	......	0.17	0.03	......	0.73	......	......	0.49	0.04	......	......	......
24....	0.22	0.08	0.09	0.05	0.55	......	0.09	......	......	......	0.06	0.23
25....	......	......	0.97	......	......	......	0.23	......	......	0.26	0.07	0.02
26....	......	......	1.30	......	......	0.08	......	......	......	0.20	0.06	1.10
27....	0.02	0.19	0.73	......	0.05	0.19	......	0.43	0.11	0.12	0.04	0.05
28....	0.05	0.40	0.41	0.03	0.32	0.12	0.16	......	......	0.02	0.02	......
29....	0.03	......	......	0.42	0.73	......	1.17	1.23	......	......	0.14	......
30....	0.02	......	......	......	......	......	......	......	......	0.16	......	......
31....	......	......	......	......	......	......	......	......	......	0.05	......	......
Total...	4.49	1.69	4.56	3.81	3.30	1.94	2.71	3.45	3.72	4.94	3.91	2.14

Daily Precipitation, in Inches, at Deerfield Reservoir, near Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	......	0.07	......	0.18	......	......	......	0.77	......	0.02	......	......
2.....	......	0.02	......	......	......	0.36	......	0.30	......	0.84	0.01	......
3.....	0.10	......	......	......	......	......	0.01	......	......	0.70	0.01	0.06
4.....	0.55	0.13	0.04	0.25	......	0.04	......	0.16	0.15	......	0.21	......
5.....	0.01	......	0.14	0.29	......	......	......	......	0.02	......	0.03	0.04
6.....	0.19	......	......	......	......	......	0.06	......	......	......	......	......
7.....	0.48	......	0.03	......	......	0.39	0.08	0.03	......	......	......	0.50
8.....	0.89	......	......	......	......	0.12	......	......	......	......	......	0.11
9.....	......	0.01	......	......	......	......	......	......	0.03	......	1.46	......
10.....	......	0.02	......	......	......	......	0.16	0.04	......	......	0.52	......
11.....	0.22	0.03	0.25	1.12	......	......	0.01	0.07	......	......	......	0.21
12.....	0.35	0.02	......	0.09	......	......	......	......	......	0.43	0.06	......
13.....	0.11	0.01	......	......	......	......	0.19	......	......	0.15	......	......
14.....	......	......	0.19	......	......	......	0.08	......	0.11	......	0.08	......
15.....	......	......	0.02	......	......	......	......	......	......	0.10	0.05	......
16.....	0.03	......	0.18	......	0.08	0.05	......	......	......	......	0.01	......
17.....	0.64	......	0.02	......	......	......	......	......	0.04	......	......	......
18.....	0.34	......	......	......	0.10	......	......	......	0.47	0.01	......	......
19.....	0.08	......	......	0.53	0.20	......	......	......	0.01	0.22	......	......
20.....	......	......	......	0.02	......	0.18	......	......	......	0.90	0.63	......
21.....	0.38	......	0.19	......	......	0.25	0.03	......	......	0.84	......	0.05
22.....	......	0.03	0.04	......	0.60	......	0.36	......	2.25	0.05	......	......
23.....	......	0.09	0.01	......	0.63	......	......	1.11	0.02	......	0.05	......
24.....	0.16	......	0.19	0.07	0.40	......	0.28	......	......	0.06	......	0.16
25.....	......	......	1.31	......	0.01	......	0.41	......	......	0.38	0.07	0.13
26.....	......	......	1.81	......	......	0.68	......	......	......	0.07	0.07	0.75
27.....	0.04	0.13	0.65	......	......	0.52	......	0.71	0.02	0.05	......	0.13
28.....	0.03	0.40	0.31	0.02	0.42	0.09	0.18	......	......	0.01	......	......
29.....	0.03	......	......	0.19	0.47	......	0.63	0.01	......	......	......	......
30.....	......	......	......	......	......	......	......	0.70	......	0.09	0.24	......
31.....	......	......	......	......	......	......	......	......	......	0.02	......	......
Total...	4.63	0.99	8.14	2.76	2.91	2.68	2.48	3.90	3.12	4.94	3.50	2.13

Daily Precipitation, in Inches, at Trenton Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1		T		0.30								
2		0.11	T			0.48		0.20		0.87		
3	0.17	T	0.07	T						0.62		T
4	0.82	0.20	0.11	0.40		T		0.17	0.07		0.02	
5		T	0.38	0.64					0.07		0.35	T
6	0.38	0.02		0.04			0.10				0.05	
7	0.63	0.06	0.16			0.14	T					0.45
8	1.00	T	0.02			T						0.70
9	0.09	0.03								T	1.25	0.02
10		T					0.22	0.05			0.48	
11	0.15	0.10		0.39			T	0.05			0.03	0.24
12	0.51	0.05		0.34						0.38	0.13	T
13	0.19	T		T			0.23					
14			0.39						T		0.02	
15			0.03								0.05	
16	0.07		0.28		T	0.32						0.05
17	0.72		0.04						T			
18	0.20		T				T		0.82			0.02
19	0.30			0.50	0.36				T	0.18	T	T
20	T					0.23				0.90	1.15	
21	0.38		0.31		0.38	0.19	T			1.45	T	0.01
22		T	0.06		0.38		0.03		1.87	0.05		
23		0.44			1.15			1.53	T			0.60
24	1.55	T	0.30	0.04	0.55		T				0.01	
25			1.20		0.12		0.22			1.04	0.10	T
26			1.57			0.05				0.10		0.60
27		0.32	0.48		0.03	0.84		0.41	T	0.05	T	0.23
28	T		T		0.58	0.09				T	T	
29	0.05			0.28	0.52		0.88	0.65		T	0.35	
30	0.11											
31												
Total...	7.32	1.32	5.40	2.93	4.07	2.34	1.68	3.06	2.83	5.64	3.99	2.92

T means trace.

Daily Precipitation, in Inches, at Gray, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1		0.09		0.30								
2		0.02				0.31		0.51		0.81		
3	0.23									0.50		
4	0.55	0.21	0.15	0.38				0.15	0.30			
5	0.03	0.02	0.26	0.51					0.10			
6	0.30						0.04					
7	0.55	0.05	0.08	0.08			0.04					
8	1.07	0.03				0.15						
9	0.20	0.02										
10			0.13				0.49	0.01				
11	0.13	0.06	0.28	0.67			0.08	0.03				
12	0.45	0.05		0.50						0.39		
13	0.14						0.46			0.12		
14			0.38				0.02		0.23			
15			0.06							0.11		
16	0.05	0.10	0.22	0.62	0.10	0.37						
17	0.73	0.04	0.02	0.06	0.06							
18	0.46						0.01		0.76			
19	0.46				0.22				0.02	0.27		
20						0.33	0.06			0.62		
21	0.51		0.38			0.14				1.41		
22			0.20		0.41				1.54			
23		0.50		0.02	1.50			1.47	0.06			
24	1.09	0.02	0.35		0.53		0.32	0.02				
25			1.19		0.15		0.28			0.91		
26			1.71							0.15		
27	0.04	0.26	1.18	0.66		1.12		0.54	0.05	0.24		
28		0.44	0.68		0.70							
29	0.02			0.13	0.89		0.76	0.53		0.10		
30	0.08											
31												
Total...	7.09	1.91	7.27	3.93	4.56	2.42	2.56	3.26	3.06	5.53	......	......

Daily Precipitation, in Inches, at Twin Rock Bridge, near Grant, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1		*0 14		0.30						0.07		
2			*0.10			0.49		0.23		0.90		
3	0.21									0.52		0.03
4	*1.16	*0.18	*0.22	0.31		0.01		0.25	0.06		0.39	
5	0.05			0 53			0.05		0.04		0.10	
6	0.30	*0.04	*0.28	*0.04			0.05					
7	0.65	*0.12										0.37
8	0 98	*0.05										§1.18
9	0.08	*0.18									1.30	
10			0 05				0.34	0.27			0.75	
11	0.12		0.18	0 63			0.17	0.02			*0.20	*0.14
12	0.32			0 25						0.40		
13	0.19						0.16			0.14		
14			0.44		0 04		0.07				0.07	
15										0.12		
16	0.05		0.23		0.80	0.43						
17	0 53	*0.05										0.09
18	0.28						0.03		0.65			*0.05
19	0.33			0 55	0.25				0.03	0.29		*0.04
20				0.03		0.33				0.90	1.13	
21	0.57		0.23			0.13				1.75		
22					0 36				1.42	0.07		
23		0.46	*0.01		1.83			1.59	0.02			
24	*0.71		*0.18		0.43		1.14	0.02		0.09		*0.26
25			1.32				0.17			0.70	0.02	
26			1.25									*0.73
27	0.05	*0 18	1 11	0.18		0.88		0.36	0.03	0.13		*0.31
28		*0.38	0.62		0.76		0.11			0.01		
29	*0.01			0 20	0.46		0.20	0.45				
30										0.02		
31												
Total	6.62	1.78	6.22	3.02	4.93	2.27	2.49	3.19	2.25	5.14	3.96	3.20

* Snow. § Snow and rain.

Daily Precipitation, in Inches, at Hoffmeister, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1			0.15	T		0.32		0.10			T*	
2		T*					T			1.59		
3	1.19	*0.21	*0 27					0.15				0.08
4	T*		*0.24						0.11		0.31	T
5		0.25		0 87								
6	0 98		*0.20	T*								
7				T*		0.08						1.62
8	1.02	0.23										*0.06
9			0 15		T*		0.28	0.21			2.35	
10							0.80	T				
11	0 43	*0.11	*0.19	0.56			T			0.36	*0.25	*0.21
12	*0.07			T			0.50					
13					0 09	T	0.15		T	0.08		
14			0.57									T*
15					T	0.30					0.11	
16	T*	*0.15	0.34		T							
17		T*	T					T				*0.08
18	0.28			0.70			T		0.81	0.20		
19				T	0.44		T				1.38	T*
20	0 95		0.19			0.75	T			3.04		*0.10
21			0.33		T		T		2.57	T*		
22	T*	0.45	T						0.12			
23	0.88	*0.06	0.18	T	2.33			1.01			0.23	*0.60
24				0.98	T		0.96			1.06	T*	T*
25					T							
26		*0.24						0.40	T	0.75	T	*0.56
27			*3.15	0.20		0.62				T		
28	T*	0.26		0.54	2.31		0.22	0.60		0.27	*0.38	
29	*0.25											
30										T*		T
31	0.30		*0.60									
Total	6.35	1.96	6.56	3.85	5.17	2.07	2.91	2.47	3.61	7.35	5.01	3.31

* Snow. T means trace.

UPPER HUDSON RIVER DRAINAGE BASIN.

DESCRIPTION.

Upper Hudson river comprises the drainage basin above tidewater influence at Troy and also above the mouth of Mohawk river at Waterford.

The head-water region is mountainous in character, in general heavily wooded, and dotted with numerous lakes and ponds. The rocks, belonging to the oldest formation and mainly granite, are either bare or covered with only a layer of spruce duff, humus and forest litter. The river emerges from the mountain region a few miles west of Glens Falls, and thence to Troy the topography is moderately rolling and the surface soil is chiefly sand.

The fall in the upper portion of the course is very rapid, amounting to about 64 feet per mile from Lake Tear-of-the-Clouds to North creek, a distance of about 52 miles. From the mouth of North creek to the mouth of the Sacandaga the descent is nearly 14 feet per mile, distributed among rapids which diminish in frequency as the Sacandaga is approached. In the succeeding 26 miles to Fort Edward the river descends 418 feet more, but of this, 175 feet is comprised within the three abrupt pitches at Palmer, Glens and Bakers falls, while most of the remainder occurs in the rapids between Jessups Landing and the oxbow above Glens Falls. Between Glens Falls and Troy nearly the entire fall of the river is utilized for the development of water-power.

The flow of the upper Hudson is controlled to some extent during the dry season by the use of Indian lake storage reservoir, and the facilities for storage works in this part of the basin are unsurpassed. The entire region is dotted with ponds and lakes, many of them of large size and fed from extensive drainage areas. Saratoga lake serves as a regulator of Fish creek, and there is a small reservoir at the head waters of the Hoosic.

UPPER HUDSON RIVER WATER-SURFACE ELEVATION RECORDS.

The following tables give records of the mean daily elevation of water-surface for 1913. The elevations are referred to Barge canal datum.

The tables of elevations of water-surface are arranged in order, proceeding upstream from the State dam at Troy to Glens Falls.

An accompanying table gives details as to the types of gages used, the datum of each and the manner in which readings are taken.

Water-surface Elevation Gages Maintained on Hudson River and Tributaries During the Year 1913.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to —
udson river:						
Troy, below dam	Jan. 19, 1903	J. B. Mackey	—0.09	Staff	0.1 foot.	0.1 foot.
Troy, above dam	Jan. 19, 1903	J. B. Mackey	9.27	"	0.1 "	0.1 "
Mechanicville, below Adirondack E. P. Corp's dam	Aug. 18, 1905	E. H. Stickney	29.00	"	0.1 "	0.1 "
Mechanicville, above Adirondack E. P. Corp's dam	Aug. 18, 1905	E. H. Stickney	43.00	"	0.1 "	0.1 "
Mechanicville, at Toll bridge	Aug. 16, 1905	D. Monty	45.77	Chain	0.1 "	0.1 "
Mechanicville, at B. & M. R. R. bridge	Aug. 15, 1905	W. H. Sigsworth	66.50	Staff	0.1 "	0.1 "
Stillwater, below dam	July 15, 1909	Ed. Hickey	74.73	"	0.1 "	0.1 "
Stillwater, at highway bridge	Aug. 1, 1908	Ed. Hickey	81.29	"	0.1 "	0.1 "
Schuylerville, at Toll bridge	Aug. 14, 1905	Ed. Durkin	81.50	"	0.1 "	0.1 "
Liberty Mills, at Free bridge	Oct. 23, 1905	W. B. Dunstan	82.99	Chain	0.1 "	0.1 "
Northumberland, above dam	April 11, 1904	P. F. Gleason	100.58	"	0.1 "	0.1 "
Fort Miller, below dam	May 1, 1904	L. C. Brasier	100.00	Staff	0.1 "	0.1 "
Fort Miller, above dam	April 11, 1904	L. C. Brasier	110.39	"	0.1 "	0.1 "
Crocker's Reef, above dam	April 11, 1904	J. H. Donnelly, Jr.	114.86	"	0.1 "	0.1 "
Fort Edward, at Bridge street	April 11, 1904	B. F. Thebo	117.87	"	0.1 "	0.1 "
Fort Edward, below I. P. Co.'s dam	1896	F. E. Chapman	121.47	"	0.1 "	0.1 "
Fort Edward, above I. P. Co.'s dam	1896	F. E. Chapman	139.83	"	0.1 "	0.1 "
Glen Falls	Mar. 9, 1905	A. B. Fisher	275.53	"	0.1 "	0.1 "
Corinth	Oct. 1, 1906	E. H. Bowker	*	"	0.1 "	0.1 "
Hoosic river – Hoosic Falls	April 3, 1904	S. L. Cluett	*	"	0.1 "	0.1 "
Sacandaga river – Northville	Feb. —, 190	P. C. Pikard	a738.51	Chain	0.1 "	0.1 "
Lake Champlain – Whitehall	Jan. 22, 1905	Geo. P. Noyes	93.00	Staff	0.1 "	0.1 "

* Arbitrary datum. *a* U. S. Weather Bureau datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above State Dam at Troy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	16.08	15.22	14.97	19.32	15.27	16.37	13.82	13.42	13.97	14.62	16.32	17.47
2.....	16.12	15.07	14.72	18.47	15.17	15.92	13.67	13.27	14.67	14.57	16.27	17.42
3.....	16.37	14.97	14.77	18.32	15.07	15.27	13.37	13.47	14.77	14.37	16.37	17.37
4.....	16.52	14.87	14.77	18.17	15.02	15.22	13.52	13.72	14.67	14.47	16.42	17.22
5.....	16.72	14.82	14.87	17.92	14.97	14.47	13.47	13.92	14.72	15.07	16.57	17.17
6.....	16.77	14.77	14.72	17.77	14.57	14.32	*a*	13.77	14.87	15.42	16.57	17.37
7.....	17.02	14.82	14.92	17.67	14.67	14.37	*a*	13.77	14.92	15.52	16.82	17.52
8.....	17.92	14.77	14.97	17.57	14.67	14.37	*a*	13.72	14.87	15.22	17.07	17.92
9.....	18.57	14.82	15.72	16.97	14.52	14.32	*a*	13.67	14.77	15.12	18.07	17.92
10.....	17.37	14.72	15.72	16.27	14.42	14.27	*a*	13.62	14.77	15.12	18.47	17.87
11.....	16.77	14.67	15.77	16.27	14.27	14.07	*a*	13.82	14.22	15.07	19.87	17.82
12.....	16.87	14.72	16.07	16.07	14.12	14.22	*a*	13.82	14.62	14.97	18.77	17.37
13.....	17.07	14.62	15.87	17.27	14.12	14.12	*a*	13.92	14.37	14.92	18.82	17.47
14.....	16.92	14.42	16.02	16.97	14.17	14.07	*a*	13.97	14.57	14.82	18.52	17.37
15.....	16.77	14.27	18.57	16.72	14.07	14.12	*a*	13.92	14.67	14.72	17.92	17.87
16.....	15.87	14.47	18.47	16.22	14.12	14.02	*a*	13.97	14.37	14.82	18.12	17.77
17.....	16.07	14.57	18.12	15.82	13.92	13.77	*a*	13.92	13.17	14.72	18.17	17.42
18.....	16.82	14.47	17.97	15.77	14.22	13.57	*a*	13.82	14.07	14.62	18.32	17.52
19.....	18.37	14.27	18.22	15.67	14.07	13.97	*a*	13.82	14.02	14.37	19.12	17.42
20.....	17.97	14.22	17.77	15.77	13.97	14.02	*a*	13.67	14.22	14.72	20.02	17.52
21.....	17.77	14.37	17.37	15.67	14.12	13.92	*a*	13.57	14.32	14.87	19.27	16.92
22.....	17.77	14.57	17.27	15.67	14.17	13.92	*a*	13.77	14.47	15.32	18.72	16.97
23.....	17.37	14.62	17.67	15.67	14.02	13.82	*a*	13.62	15.32	15.42	18.32	17.07
24.....	16.82	14.57	17.67	15.57	14.12	13.77	*a*	13.77	15.52	15.57	18.17	17.17
25.....	16.62	14.87	17.57	15.07	14.77	13.92	*a*	13.82	15.57	15.92	18.07	17.27
26.....	16.57	14.77	21.32	15.22	15.57	13.87	*a*	13.62	15.22	16.12	17.97	17.22
27.....	16.47	14.72	23.57	15.67	15.72	13.82	*a*	13.67	14.62	16.17	17.82	17.32
28.....	16.27	14.87	30.12	15.27	15.97	13.77	*a*	13.37	14.57	16.52	17.72	17.82
29.....	15.97	......	29.42	15.42	16.77	13.87	*a*	13.37	14.57	17.57	17.57	16.82
30.....	15.52	......	25.57	15.37	17.07	13.77	*a*	13.57	14.37	16.67	17.27	16.62
31.....	15.27	......	21.12	......	16.47	......	*a*	13.57	......	16.77	......	16.67

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River below Dam of Adirondack Electric Power Corporation, near Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.*a*
1913.												
1.....	32.70	32.60	32.00	37.75	32.35	33.70	31.25	30.80	30.15	30.85	32.65	......
2.....	32.55	31.85	31.50	37.75	31.75	33.50	31.05	30.70	30.35	30.75	32.65	......
3.....	32.90	32.40	31.55	35.65	31.40	32.95	31.30	30.25	30.25	31.05	33.30	......
4.....	34.00	32.05	31.50	35.80	31.65	32.50	30.35	30.75	30.40	31.05	33.10	......
5.....	33.40	32.05	31.45	35.10	31.90	32.10	30.55	30.70	30.55	30.55	32.25	......
6.....	33.65	31.70	31.70	35.25	31.35	32.05	30.40	30.70	30.25	30.40	31.75	......
7.....	33.85	32.00	31.75	35.80	31.60	31.85	30.80	30.95	29.30	31.40	32.10	......
8.....	34.50	31.90	31.25	35.00	31.35	31.35	30.95	30.65	29.65	30.50	31.95	......
9.....	34.30	31.30	30.65	34.50	31.60	31.65	31.15	30.60	30.15	31.15	30.75	......
10.....	33.70	32.05	32.05	33.90	31.50	31.50	31.15	30.35	29.40	30.95	32.20	......
11.....	33.75	31.55	32.50	33.45	30.75	31.30	30.90	30.35	29.20	30.90	37.10	......
12.....	33.85	31.65	32.75	34.15	31.15	31.20	30.70	30.30	29.40	30.85	36.25	......
13.....	33.90	31.45	32.40	33.70	30.95	31.20	30.60	30.25	30.25	30.90	35.90	......
14.....	33.00	31.30	33.10	33.90	31.10	31.00	30.50	30.25	30.25	30.80	35.20	......
15.....	33.10	31.10	33.40	33.40	31.10	30.40	30.55	30.15	30.35	30.90	34.65	......
16.....	32.85	30.80	33.40	33.45	31.00	31.10	30.65	30.35	30.45	31.00	*a*	......
17.....	33.10	31.60	35.50	33.10	31.15	31.20	31.15	30.30	30.30	30.90	*a*	......
18.....	34.50	31.70	34.65	33.05	30.85	31.05	30.35	30.40	30.25	30.85	*a*	......
19.....	34.95	31.45	34.45	32.90	31.10	31.15	30.75	30.30	30.25	30.40	*a*	......
20.....	34.70	31.40	34.40	32.55	31.10	31.35	30.60	30.60	30.25	31.05	*a*	......
21.....	35.10	31.15	33.25	32.45	30.95	31.50	30.75	30.60	29.85	31.20	*a*	......
22.....	35.30	31.30	33.20	32.45	31.05	31.25	30.40	30.40	30.35	31.80	*a*	......
23.....	34.75	31.55	33.50	32.50	31.25	31.35	30.25	30.10	30.50	32.60	*a*	......
24.....	34.70	32.35	33.40	32.15	32.40	31.50	30.50	30.10	30.75	32.25	*a*	......
25.....	34.45	32.00	33.20	32.20	32.45	31.35	30.55	30.05	31.80	32.35	*a*	......
26.....	34.25	31.90	37.85	31.95	32.75	31.40	30.80	30.25	30.65	34.95	*a*	......
27.....	34.30	31.15	*a*	31.90	32.50	31.50	30.60	30.25	30.30	34.20	*a*	......
28.....	33.50	31.75	*a*	31.90	32.40	31.60	30.75	30.05	29.90	33.90	*a*	......
29.....	32.70	......	*a*	32.80	33.05	30.95	30.15	30.40	30.60	33.95	*a*	......
30.....	32.55	......	*a*	32.20	34.50	30.90	30.65	30.20	30.10	33.10	*a*	......
31.....	32.60	......	*a*	......	34.25	......	30.45	30.05	......	32.70	......	......

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above Dam of Adirondack Electric Power Corporation, near Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	49.25	49.35	48.75	53.55	49.25	50.25	48.90	49.15	49.05	49.20	49.25	49.50
2.....	49.15	50.00	48.65	53.00	48.80	50.15	49.20	48.9[illegible]	48.95	49.45	48.80	49.30
3.....	49.55	49.75	49.55	52.30	48.75	49.60	49.05	48.70	49.10	49.35	49.55	49.70
4.....	50.10	49.25	49.10	51.75	48.40	48.90	48.85	49.00	48.90	49.20	49.40	49.10
5.....	50.10	49.30	48.95	51.70	49.05	48.70	49.05	49.10	49.25	49.20	49.15	49.40
6.....	49.95	49.15	48.80	51.95	48.50	49.20	48.75	49.20	49.35	49.20	49.00	49.40
7.....	50.25	48.85	49.15	51.80	49.10	49.35	49.25	49.10	49.35	49.35	49.15	48.80
8.....	50.65	48.40	48.80	51.35	48.10	49.15	48.60	49.10	49.10	49.45	49.25	49.60
9.....	50.55	48.25	48.75	51.00	48.80	49.75	49.10	49.20	49.15	49.35	48.95	49.50
10.....	50.65	48.75	49.30	50.55	48.35	49.25	48.75	49.00	49.10	49.30	49.70	49.55
11.....	49.90	48.20	49.15	50.40	47.85	49.55	49.20	49.10	48.80	49.20	50.55	49.60
12.....	50.20	47.95	49.45	50.75	47.95	49.25	48.85	48.90	49.10	49.25	50.70	49.40
13.....	50.45	47.85	49.25	50.85	47.75	49.40	48.50	49.00	49.20	49.30	50.20	48.90
14.....	49.60	47.70	49.80	50.80	48.05	49.20	49.15	49.00	49.20	49.25	49.65	49.05
15.....	49.75	47.80	51.40	50.35	47.95	49.20	49.05	49.05	49.00	49.20	49.35	49.70
16.....	49.70	47.05	50.65	50.35	48.65	49.50	49.25	49.15	48.90	49.40	49.15	49.15
17.....	49.60	48.10	50.75	50.00	47.90	49.25	48.98	48.75	49.30	49.30	49.45	49.20
18.....	50.10	47.65	50.10	50.10	47.95	49.20	48.70	48.80	49.00	49.30	49.35	49.50
19.....	50.95	48.45	49.95	50.00	48.30	49.00	49.00	49.40	49.15	49.10	49.30	49.05
20.....	50.80	48.25	50.10	49.70	47.70	49.20	48.95	49.30	49.05	49.30	49.10	49.20
21.....	51.00	48.90	50.70	49.55	48.10	49.15	49.00	49.00	49.20	49.35	48.75	48.95
22.....	51.00	48.70	51.05	49.60	48.00	48.85	49.35	49.15	49.15	49.35	49.65	49.55
23.....	50.80	48.60	51.05	49.55	48.90	49.20	49.20	49.15	49.20	49.45	49.45	49.55
24.....	50.80	49.50	51.00	49.25	49.60	49.40	49.05	49.30	49.25	49.50	49.35	49.50
25.....	50.45	49.20	51.20	49.20	49.65	49.25	49.15	49.15	49.35	49.50	49.60	48.90
26.....	50.35	49.65	53.55	49.05	49.55	49.10	49.00	49.05	49.40	49.65	49.45	49.45
27.....	50.20	49.10	55.95	48.85	48.95	49.05	48.85	49.20	49.25	49.70	49.20	48.90
28.....	49.70	49.20	58.50	48.80	49.25	49.30	49.20	49.20	49.20	49.35	49.20	48.35
29.....	49.60	......	56.75	49.40	50.25	49.00	48.90	49.15	49.30	49.45	49.20	49.05
30.....	49.45	......	55.15	49.15	50.80	48.55	49.10	49.20	49.25	49.55	49.00	49.20
31.....	49.40	......	54.00	......	50.60	......	48.45	49.25	......	49.25	......	48.90

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at Toll Bridge, Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	*a*April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	51.57	51.37	50.67	......	*a*	52.57	50.22	50.02	49.62	49.87	50.97	50.47
2.....	51.52	51.07	50.62	......	*a*	52.62	50.17	49.67	49.52	50.07	50.47	50.27
3.....	51.72	51.12	50.47	......	*a*	52.22	50.22	50.07	49.82	50.02	51.02	50.22
4.....	53.17	51.12	50.37	......	*a*	52.07	49.77	50.17	49.62	49.87	51.02	49.77
5.....	52.22	50.67	50.32	......	*a*	51.57	49.57	49.97	49.82	49.92	50.92	50.27
6.....	52.22	50.27	50.27	......	*a*	51.42	*a*	50.07	49.97	49.72	50.72	50.22
7.....	52.87	50.12	50.12	......	*a*	51.32	50.17	50.17	49.77	50.12	50.62	49.52
8.....	53.77	50.17	50.07	......	*a*	*a*	50.12	50.07	49.92	50.22	50.47	50.92
9.....	52.77	49.77	50.37	......	*a*	51.32	49.87	49.92	49.77	49.97	49.12	50.82
10.....	52.47	50.17	50.97	......	*a*	50.77	50.17	49.77	49.77	49.97	51.07	50.77
11.....	52.42	49.92	51.77	......	*a*	50.77	50.07	50.02	49.42	50.02	54.22	50.67
12.....	52.37	49.87	51.72	......	*a*	50.62	49.97	49.67	49.67	49.82	52.97	50.62
13.....	52.17	49.92	54.27	......	*a*	50.07	*a*	49.72	49.87	49.82	52.47	50.22
14.....	52.17	49.77	54.77	......	*a*	50.32	49.92	49.77	49.72	49.72	51.92	50.37
15.....	52.02	49.72	54.37	......	*a*	*a*	50.12	49.77	49.52	50.02	51.42	50.67
16.....	51.97	49.62	54.22	......	*a*	50.32	50.12	49.82	49.67	49.97	51.07	50.27
17.....	52.12	49.67	53.77	......	50.22	50.42	50.12	49.27	49.87	49.92	51.07	49.97
18.....	52.67	49.42	53.47	......	50.07	50.82	49.67	49.87	49.62	49.82	50.87	49.92
19.....	53.37	49.62	53.32	......	50.42	50.52	50.07	50.07	49.92	49.77	50.67	49.97
20.....	53.37	49.92	53.47	......	50.17	50.27	*a*	49.87	49.82	50.02	50.62	50.07
21.....	53.57	50.02	53.87	......	50.07	50.27	49.87	49.82	49.67	50.02	50.52	49.87
22.....	53.82	50.92	55.27	......	50.17	*a*	50.02	49.97	49.72	50.37	51.17	50.17
23.....	53.67	51.27	55.77	......	50.52	50.22	50.12	49.72	49.87	50.92	50.92	50.17
24.....	53.37	50.82	55.97	......	51.57	50.32	50.07	49.72	49.97	50.92	51.07	50.22
25.....	53.17	50.92	56.77	......	51.97	50.67	50.17	49.62	50.52	50.67	50.72	50.02
26.....	52.97	50.77	57.52	......	52.02	50.32	50.12	49.77	50.37	50.22	50.12	49.82
27.....	52.77	50.82	60.27	......	51.97	50.42	*a*	49.77	49.97	52.32	50.27	49.57
28.....	52.47	50.77	63.02	......	51.82	50.62	50.27	49.72	49.57	52.27	50.37	49.67
29.....	51.87	......	*a*	......	53.32	*a*	49.62	49.82	49.82	51.62	50.12	49.82
30.....	51.97	......	*a*	......	53.57	50.22	50.12	49.72	49.52	51.52	50.22	49.77
31.....	52.17	......	*a*	......	53.32	......	49.82	49.77	......	51.17	......	49.82

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at B & M. R. R. Bridge, Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	71.00	70.35	69.70	73.40	69.45	72.75	65.40	67.20	68.10	65.90	68.85	68.25
2.....	71.20	70.60	70.25	72.60	69.30	71.75	65.30	67.40	68.60	66.20	69.20	70.60
3.....	70.60	70.25	69.55	72.35	69.40	71.35	68.00	68.10	67.60	66.40	68.10	69.00
4.....	71.75	69.80	69.25	71.65	69.50	71.20	69.55	68.70	67.00	66.00	67.40	68.40
5.....	71.95	69.70	69.00	71.55	69.35	71.05	70.40	67.20	67.45	66.10	67.30	69.60
6.....	71.60	69.60	68.75	72.25	68.40	71.15	70.60	67.80	67.70	65.90	67.05	71.20
7.....	72.25	69.40	68.45	71.85	68.30	71 05	68 10	66.85	67 80	67 60	67.15	71.10
8.....	72.60	68.50	68.30	71.30	68.50	72.45	66.00	68.30	68.35	67.50	67.50	71.60
9.....	71.95	69.30	69.00	71.05	69.35	70.90	66.05	68.60	67.70	67.65	68.50	71.30
10.....	71.75	69.05	68.70	70.80	68.95	69.45	65.90	69.35	67.00	68.40	67.30	71.55
11.....	71.80	68.55	69.90	70 00	69.30	68.20	67.40	*a*	66.80	68.65	70.65	71.65
12.....	71.80	68.90	70 20	70.80	68.80	69.20	67.60	67.60	66.70	69.00	70.35	71.50
13.....	70.40	69.10	69.50	71.40	68.30	67.80	68.40	66.60	67.35	67.20	70.10	71.70
14.....	70.25	68.90	70.60	71.15	68.30	68.45	65.80	66.60	67.70	69.00	69.55	71.80
15.....	70.20	69.10	71.70	70.35	68.30	72.45	67.60	66.60	66.80	68.30	70.10	71.25
16.....	70.35	70.20	72.60	70.20	68.35	70.45	67.50	66.80	66.80	66.30	70.10	70.95
17.....	70.60	68.35	71.40	70.00	68.30	69.90	65.80	67.10	67.80	66.80	68.95	70.85
18.....	71.80	68.55	70.90	70.00	69.25	69.90	66.05	66.75	67.20	66.50	68.85	70.70
19.....	71.80	68.80	70.85	70.15	67.75	69.60	67.90	67.20	67.40	66.65	68.60	70.85
20.....	70.40	68.45	70.95	70.35	67.50	70.20	69.30	67.45	66.90	66.90	68.60	70.90
21.....	70.25	68.25	71.35	69.95	67.90	70.60	68.80	67.80	67.00	67.90	68.50	70.75
22.....	70.20	68.60	72.00	69.90	69.50	69.00	66.95	66.75	68.00	67.50	68.95	70.60
23.....	70.35	71.30	72.60	69.90	71.00	70.10	67.00	67.40	67.60	67.80	69.55	71.05
24.....	70.60	69.45	71.60	69.70	72.20	70.30	66.90	66.20	67.90	67.60	69.05	71.50
25.....	71.90	69.10	72.50	69.65	72.10	70.60	68.90	66.10	68.10	67.10	68.90	71.70
26.....	72.10	69.00	73.70	69.50	72.25	70.20	65.85	66.20	67.60	68.70	68.60	70.70
27.....	71.80	68.95	77.50	70.10	72.15	69.90	66.30	66.90	66.90	70.00	68.30	69.60
28.....	71.45	69.55	81.30	69.50	72.05	70.10	66.25	66.80	66.30	69.30	68.35	70.10
29.....	71.25	......	78.70	70.15	72.50	67.95	66.20	68.55	66.25	69.30	68.60	69.60
30.....	71.05	......	76.00	......	72.75	65.50	66.90	67.60	66.20	69.05	68.95	69.70
31.....	70.60	......	74.50	......	72.60	......	67.00	68.10	......	68.85	......	70.10

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River below Dam at Stillwater, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.*a*	Oct.*a*	Nov.*a*	Dec.*a*
1913.												
1.....	77.03	77.23	76.28	81.03	77.43	77.58	76.08	76.48	......	......	......	......
2.....	76.98	77.13	76 53	80.63	77.08	77.58	76.13	76.43	......	......	......	......
3.....	77.03	76.88	76.78	79.93	77.18	77.38	76.03	76.38	......	......	......	......
4.....	77.93	76.83	76.33	79.48	76.83	77.28	75.98	76.23	......	......	......	......
5.....	77.68	76.88	76.23	79.43	76.73	77.08	75.93	76.23	......	......	......	......
6.....	77.73	76.63	76.23	79.73	76.48	77.08	75.78	76.23	......	......	......	......
7.....	77.88	76.33	76.68	79.43	76.38	76.93	75.93	76.33	......	......	......	......
8.....	78.03	76.38	76.58	79.18	76.43	76.73	75.98	76.33	......	......	......	......
9.....	78.13	76.58	76.28	78.73	76.48	76.53	75.98	76.13	......	......	......	......
10.....	77.93	76.63	76.78	78.49	76.68	73.48	75.93	76.23	......	......	......	......
11.....	77.93	76.23	77.13	77.98	76.53	76.33	75.93	76.28	......	......	......	......
12.....	77.98	76.33	77.08	78.38	76.38	76.43	75.88	76.38	......	......	......	......
13.....	77.83	76.73	76.98	78.38	76.13	76.58	75.83	76.23	......	......	......	......
14.....	77.73	76.43	77.68	78.33	76.18	76.33	75.98	76.18	......	......	......	......
15.....	77.83	73.28	79.08	77.98	76.28	75.98	75.93	76.13	......	......	......	......
16.....	77.68	76.28	79.13	77.88	76.28	76.03	75.93	76.08	......	......	......	......
17.....	77.58	76.48	78.98	77.83	76.33	76.13	75.98	75.93	......	......	......	......
18.....	77.93	76.48	78.63	77.83	76.28	76.08	75.98	76.08	......	......	......	......
19.....	78.38	76.38	78.53	77.63	76.33	76.13	76.78	76.13	......	......	......	......
20.....	78.53	76.18	78.63	77.58	76.33	76.13	76.88	76.08	......	......	......	......
21.....	77.78	76.43	78.98	77.38	76.33	76.08	76.88	76.03	......	......	......	......
22.....	78.83	73.48	79.68	77.28	76.48	76.03	76.98	75.98	......	......	......	......
23.....	78.63	76.43	79.73	77.23	76.58	76.13	77.08	75.98	......	......	......	......
24.....	78.68	76.98	79.73	77.08	76.88	76.13	76.93	75.73	......	......	......	......
25.....	78.53	76.58	79.83	76.98	77.13	76.13	76.83	75.83	......	......	......	......
26.....	78.23	76.48	81.78	76.93	77.03	76.03	76.73	75.68	......	......	......	......
27.....	78.18	76.38	83.23	76.98	77.08	73.13	76.73	75.63	......	......	......	......
28.....	77.53	76.43	84.28	77.33	77.28	76.18	76.53	75.63	......	......	......	......
29.....	77.33	......	83.18	77.28	77.48	76.03	76.48	75.73	......	......	......	......
30.....	77.18	......	82.33	77.13	77.68	76.13	76.43	75.68	......	......	......	......
31.....	77.23	......	81.43	......	77.73	......	76.38	75.38	......	......	......	......

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at Highway Bridge, Stillwater, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.*a*	Oct.*a*	Nov.*a*	Dec.*a*
1913.												
1	85.19	85.39	84.59	88.49	85.39	86.04	83.94	84.84	......	......	......	......
2	85.09	85.29	84.49	88.09	85.29	85.94	83.89	84.74	......	......	......	......
3	85.19	85.19	84.59	87.59	85.29	85.79	83.84	84.74	......	......	......	......
4	85.89	84.99	84.59	87.19	85.29	85.34	84.04	84.64	......	......	......	......
5	85.74	84.89	84.49	87.19	85.19	85.04	83.94	84.69	......	......	......	......
6	85.79	84.74	84.44	87.44	85.29	84.99	83.89	84.69	......	......	......	......
7	85.89	84.64	84.49	87.09	85.24	84.94	83.94	84.74	......	......	......	......
8	85.99	84.49	84.39	86.74	85.14	84.79	83.89	84.59	......	......	......	......
9	85.09	84.49	84.34	86.49	85.24	84.84	83.89	84.59	......	......	......	......
10	85.99	84.39	84.79	86.19	85.09	84.64	83.84	84.34	......	......	......	......
11	85.84	84.49	85.34	85.89	85.14	84.59	83.89	84.04	......	......	......	......
12	85.94	84.49	85.29	86.09	84.84	84.49	83.79	83.84	......	......	......	......
13	85.74	84.44	85.14	86.14	84.54	84.34	83.69	83.59	......	......	......	......
14	85.69	84.49	85.89	86.19	84.49	84.34	83.74	83.59	......	......	......	......
15	85.64	84.44	86.69	85.94	84.59	84.14	83.74	83.74	......	......	......	......
16	85.49	84.34	86.84	85.94	84.54	84.19	83.69	83.79	......	......	......	......
17	85.59	84.39	86.69	85.79	84.49	84.09	83.54	83.84	......	......	......	......
18	85.89	84.44	86.44	85.84	84.39	84.14	83.69	83.84	......	......	......	......
19	86.29	84.49	86.29	85.64	84.49	84.09	84.44	83.84	......	......	......	......
20	86.34	84.34	86.39	85.44	84.44	84.09	84.59	83.74	......	......	......	......
21	86.64	84.44	86.74	85.44	84.49	84.14	84.54	83.89	......	......	......	......
22	86.69	84.54	87.19	85.44	84.54	84.09	84.64	83.74	......	......	......	......
23	86.49	84.74	87.54	85.34	84.74	84.14	84.54	83.69	......	......	......	......
24	86.54	84.99	87.24	85.29	85.24	84.09	84.59	83.64	......	......	......	......
25	86.34	84.69	87.29	85.29	85.49	84.09	84.74	83.74	......	......	......	......
26	86.19	84.64	89.34	85.34	85.44	84.09	84.74	83.59	......	......	......	......
27	86.04	84.69	90.89	85.39	85.54	84.09	84.69	83.49	......	......	......	......
28	85.74	84.69	92.09	85.34	85.79	84.14	84.84	83.44	......	......	......	......
29	85.79	......	91.04	85.29	86.24	83.89	84.79	83.34	......	......	......	......
30	85.69	......	90.04	85.34	86.24	84.09	84.74	83.24	......	......	......	......
31	85.39	......	88.94	......	86.14	......	84.79	83.09	......	......	......	......

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at Toll Bridge, Schuylerville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	86.05	86.30	85.05	93.95	86.40	87.40	84.20	84.95	83.85	84.65	86.25	85.45
2	85.80	85.35	84.90	92.65	85.90	87.00	84.15	84.80	83.70	84.65	85.80	85.35
3	85.90	85.15	85.00	91.30	86.00	86.50	83.95	85.05	83.60	84.55	86.15	85.25
4	87.30	85.85	85.05	90.25	85.50	86.10	83.90	85.05	84.05	84.15	86.00	85.25
5	86.90	85.75	84.85	90.15	85.80	85.80	84.10	84.90	84.60	84.10	85.70	85.30
6	86.90	85.40	84.80	90.95	85.20	85.50	83.95	84.80	84.40	84.15	85.75	85.25
7	86.95	85.30	84.95	90.25	85.55	85.30	84.00	84.65	84.00	85.15	85.70	85.05
8	87.40	85.15	84.55	89.40	85.15	85.10	84.00	84.85	83.35	85.35	85.65	86.15
9	87.50	84.75	84.65	88.75	85.85	85.10	84.05	84.55	82.60	85.00	85.20	86.30
10	88.05	85.25	85.75	88.15	85.25	84.90	84.10	84.40	82.05	85.00	87.00	86.25
11	87.50	85.05	86.50	87.70	84.80	84.90	84.05	84.00	81.75	85.15	88.75	86.05
12	87.35	85.15	86.45	87.90	84.75	84.75	83.95	83.90	82.10	85.00	88.35	85.95
13	86.95	84.85	86.15	87.50	84.65	84.55	83.80	83.65	82.15	84.90	87.65	85.65
14	86.55	85.00	87.20	87.75	84.75	84.50	83.65	83.70	82.10	85.05	87.10	85.50
15	86.50	84.80	89.55	87.50	84.80	84.30	83.90	84.10	82.10	85.00	86.65	86.05
16	86.45	84.80	88.25	87.40	84.70	84.35	83.90	84.30	82.00	84.95	86.30	85.70
17	86.70	85.15	89.10	87.05	84.65	84.30	84.05	84.35	82.05	84.55	86.05	85.55
18	87.25	84.95	88.50	87.15	84.75	84.30	84.35	83.85	82.50	84.25	85.75	85.60
19	87.00	84.85	88.25	86.85	84.95	85.25	85.30	83.95	82.80	84.65	85.60	85.45
20	88.55	84.95	88.20	86.85	84.60	84.40	84.95	83.75	82.80	84.30	85.65	85.40
21	88.75	84.90	89.05	86.50	84.65	84.40	84.60	83.60	82.90	85.30	85.70	85.05
22	88.90	84.80	90.05	86.30	84.70	84.30	84.75	83.35	82.90	85.90	86.20	85.15
23	88.85	85.50	90.60	86.55	84.90	84.25	84.85	83.15	83.65	86.40	86.05	85.25
24	88.65	85.65	90.35	86.05	86.00	84.45	84.90	82.85	85.05	86.05	86.00	85.40
25	88.25	85.25	90.35	86.20	86.35	84.35	84.75	82.55	85.30	86.00	85.80	85.10
26	87.80	85.15	95.05	86.00	86.25	84.40	84.80	82.60	85.55	86.05	85.75	84.95
27	87.60	85.05	*a*	86.05	86.10	84.30	85.10	82.50	85.50	87.25	85.50	85.70
28	87.10	85.15	*a*	85.75	85.95	84.30	85.15	82.70	84.95	86.95	85.45	85.00
29	86.75	......	*a*	86.50	86.95	84.05	84.70	83.25	84.50	86.65	85.35	84.60
30	86.50	......	97.50	86.00	88.00	84.05	84.90	83.75	84.40	86.35	85.30	84.80
31	86.35	......	95.50	......	87.85	......	85.10	83.80	......	86.25	......	84.85

a Beyond limit of gage.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at Free Bridge, near Liberty Mills, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	86.51	87.54	85.04	94.99	86.99	88.99	84.34	84.89	83.00	84.44	87.59	85.44
2.....	86.59	87.19	85.19	94.19	83.69	88.91	84.24	84.80	83.09	84.44	87.49	85.64
3.....	87.94	87.24	85.34	92.44	83.59	88.74	84.30	85.19	83.49	84.44	87.19	85.64
4.....	87.79	87.39	85.29	91.39	83.40	88.64	84.34	85.44	83.89	84.39	87.04	85.64
5.....	87.79	87.04	85.19	91.34	83.44	87.89	84.84	85.50	84.69	84.34	86.89	85.49
6.....	87.69	86.99	85.09	91.79	86.14	87.69	84.59	84.74	84.49	84.44	86.64	85.24
7.....	88.34	83.94	85.09	91.59	85.90	87.64	84.44	84.99	84.29	84.54	86.54	85.19
8.....	88.49	86.39	85.04	90.49	85.94	83.79	84.39	84.94	83.94	84.44	86.19	86.99
9.....	88.64	85.64	84.94	90.00	85.49	86.09	84.34	84.79	83.74	84.34	86.19	87.44
10.....	88.69	85.09	85.54	89.19	85.50	85.84	84.34	84.69	83.54	84.09	88.64	86.94
11.....	88.79	85.29	87.14	89.04	85.79	85.39	84.34	84.74	83.29	83.69	89.64	86.39
12.....	88.69	85.19	87.34	88.89	85.74	85.39	84.24	84.39	83.09	83.49	89.79	86.09
13.....	88.04	85.19	88.54	89.14	85.69	84.94	84.09	84.09	83.00	83.54	90.39	85.79
14.....	88.04	84.44	89.49	88.84	85.34	84.79	84.34	84.09	83.01	84.04	89.74	85.69
15.....	87.29	85.09	90.19	88.79	85.69	84.39	84.24	83.74	83.00	84.24	88.99	85.99
16.....	87.29	84.99	90.09	88.44	85.54	84.59	84.24	83.99	83.09	84.44	88.69	86.09
17.....	87.39	85.34	90.09	83.44	85.39	84.44	84.34	84.09	83.00	84.69	88.09	85.94
18.....	88.09	85.34	89.74	87.74	85.34	84.84	84.54	84.14	83.00	84.64	87.09	85.99
19.....	88.09	85.49	91.24	87.69	85.34	84.69	84.74	83.99	83.14	84.89	86.09	85.79
20.....	88.54	85.29	91.49	87.79	85.39	84.64	83.54	84.39	83.01	84.94	85.84	85.64
21.....	89.99	85.14	91.19	87.44	85.44	84.49	84.49	84.24	83.19	85.44	86.19	85.64
22.....	90.34	85.49	90.94	87.04	85.34	84.59	84.19	83.69	83.39	85.99	86.14	85.64
23.....	89.99	85.84	91.24	86.89	85.44	84.39	84.54	83.69	83.84	86.49	86.14	85.59
24.....	89.74	85.84	91.39	83.74	83.24	84.20	84.94	83.09	84.29	86.44	85.99	85.39
25.....	89.39	85.54	92.74	87.34	87.59	84.24	84.60	83.05	84.54	86.54	86.29	85.29
26.....	88.49	85.44	98.74	83.50	87.44	84.19	84.49	83.14	84.74	83.39	86.24	85.69
27.....	88.39	85.39	102.99	83.49	88.24	84.19	84.40	83.79	84.94	87.34	86.14	85.89
28.....	88.29	85.19	105.49	83.50	89.04	84.20	84.44	83.44	84.59	87.14	85.74	85.79
29.....	88.39	......	102.74	83.29	88.99	84.34	84.59	83.00	84.64	87.14	85.34	85.39
30.....	88.30	......	98.49	83.54	88.84	84.30	84.94	83.01	84.59	87.19	85.59	85.19
31.....	88.74	......	95.74	......	88.99	......	84.84	83.00	......	87.30	......	85.09

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above Dam at Northumberland, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	104.38	104.98	103.48	106.58	104.38	105.98	103.63	102.28	102.53	102.43	103.83	103.88
2.....	104.53	105.48	104.08	106.38	104.38	105.68	103.78	102.33	102.28	102.33	104.08	103.38
3.....	104.38	105.33	103.98	106.03	104.43	105.18	103.98	103.08	102.33	102.53	103.93	103.78
4.....	105.28	104.33	103.58	105.58	104.58	104.93	103.58	102.93	102.38	102.38	103.73	103.73
5.....	105.58	104.28	103.38	105.58	104.28	104.68	103.58	102.33	102.53	103.08	103.48	103.68
6.....	105.58	103.78	103.38	106.48	103.53	104.48	103.88	102.33	102.48	102.73	103.28	103.53
7.....	105.43	103.78	103.28	106.18	103.58	104.33	103.28	102.38	102.33	102.43	103.48	104.08
8.....	105.23	103.48	102.98	105.33	103.48	104.58	103.28	102.48	102.33	102.38	103.28	104.18
9.....	104.98	103.88	103.48	105.03	103.88	104.18	102.78	102.28	102.28	102.28	103.98	104.28
10.....	104.78	103.78	103.38	104.68	103.78	103.53	102.38	102.48	102.28	102.23	104.63	104.38
11.....	105.33	103.58	104.38	104.53	103.48	103.58	102.33	102.53	102.23	102.28	105.98	103.98
12.....	105.58	103.98	104.28	104.58	103.28	103.13	102.18	102.18	102.18	103.18	105.68	104.23
13.....	105.38	103.38	104.13	104.78	103.13	102.73	102.78	102.23	102.38	102.78	105.38	103.63
14.....	105.28	103.58	104.83	104.53	103.23	102.58	102.68	102.28	102.68	102.23	105.08	104.38
15.....	105.13	103.38	105.68	104.08	103.08	104.08	102.38	102.28	102.28	102.28	104.68	104.08
16.....	105.18	103.68	105.88	104.28	103.13	103.78	102.53	102.38	102.18	102.33	104.18	103.93
17.....	105.23	103.73	105.68	104.18	103.68	103.08	102.48	102.58	102.38	102.48	104.48	103.78
18.....	105.38	103.58	104.88	104.08	104.33	103.03	102.38	102.58	102.23	102.23	104.28	103.98
19.....	105.98	103.33	104.88	103.88	104.13	103.83	102.58	102.53	102.38	103.23	104.18	103.68
20.....	106.08	103.33	105.18	104.08	102.98	103.93	102.58	102.38	102.18	102.63	103.78	103.48
21.....	106.03	103.53	105.23	103.78	103.23	103.43	102.28	102.28	103.03	102.43	104.38	103.68
22.....	105.93	103.58	105.73	103.28	103.58	103.63	102.33	102.33	102.98	103.03	104.58	103.53
23.....	105.58	103.88	106.28	103.43	104.13	103.48	102.38	102.28	102.83	103.58	104.58	103.58
24.....	105.58	103.83	106.18	103.23	104.88	103.08	102.23	103.13	102.83	103.98	104.48	103.68
25.....	105.63	103.98	105.28	103.18	105.38	102.88	102.48	102.93	103.03	104.48	104.13	104.08
26.....	105.78	103.78	108.38	103.23	105.28	103.28	102.38	102.38	102.38	104.53	104.18	103.98
27.....	105.68	103.68	110.03	103.68	104.93	103.38	103.28	102.13	102.28	104.58	103.88	103.68
28.....	105.18	103.78	*a*	103.78	105.08	103.28	102.83	102.73	102.68	104.43	103.48	103.58
29.....	105.13	......	*a*	104.73	105.48	103.88	102.58	102.33	102.43	104.38	103.43	103.13
30.....	105.13	......	108.98	104.28	105.58	103.73	102.63	102.33	102.23	104.53	103.98	103.08
31.....	105.23	......	107.48	......	105.43	......	102.43	102.88	......	104.08	......	103.28

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a Beyond limit of gage.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River below Dam at Fort Miller, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	104.75	105.00	103.50	109.20	104.90	103.45	104.50	103.00	103.10	102.70	104.40	104.45
2.....	104.90	105.45	103.75	108.20	104.60	105.90	104.10	102.95	102.45	102.70	104.85	104.35
3.....	105.00	104.80	104.05	107.35	104.65	105.60	104.00	104.65	102.85	103.05	104.50	103.80
4.....	105.90	104.45	103.30	103.75	104.85	105.40	104.60	102.95	102.85	102.90	103.75	103.80
5.....	103.10	104.55	103.20	107.05	104.55	105.05	104.40	102.95	102.60	103.95	103.55	103.70
6.....	105.85	104.45	103.05	107.70	104.10	105.00	104.30	102.65	103.00	103.60	103.50	103.70
7.....	105.75	104.10	103.00	107.05	104.40	104.80	103.60	103.00	102.50	103.45	103.60	104.80
8.....	105.95	104.10	103.00	103.45	103.90	104.75	104.20	102.90	102.50	102.80	103.05	104.95
9.....	103.25	103.80	103.20	103.00	104.45	104.50	103.60	103.15	102.60	103.00	104.10	105.10
10.....	103.15	104.25	104.35	105.35	104.00	104.05	102.50	102.95	102.55	102.80	105.10	105.00
11.....	105.90	103.20	104.75	105.00	104.10	103.85	102.35	102.65	102.60	102.85	106.85	104.85
12.....	103.10	103.55	104.55	105.35	103.65	103.70	102.55	102.80	102.85	102.65	106.75	104.70
13.....	103.15	103.10	104.60	105.20	103.40	102.95	103.00	102.70	102.70	102.95	106.35	104.20
14.....	105.65	103.65	105.30	105.30	103.75	103.35	103.00	102.95	102.95	103.00	105.90	105.15
15.....	105.45	103.20	105.65	105.05	104.25	104.15	103.05	102.65	102.80	102.65	105.45	104.65
16.....	105.20	103.85	103.75	105.00	103.90	103.65	103.00	102.95	102.70	102.60	105.50	104.35
17.....	103.25	104.05	103.30	104.85	104.25	103.00	103.15	103.45	102.85	102.50	104.95	103.95
18.....	105.65	103.60	103.05	104.80	104.65	102.80	103.10	103.05	103.10	102.65	104.80	104.30
19.....	103.40	103.50	105.70	104.60	104.45	102.95	103.30	103.00	103.10	103.65	104.60	103.85
20.....	103.50	103.10	105.70	104.95	103.45	103.65	103.55	102.70	102.95	103.25	104.40	103.70
21.....	103.65	103.20	103.15	104.75	103.85	103.25	102.75	102.75	103.40	103.05	104.70	104.30
22.....	103.75	103.20	103.95	104.45	104.25	104.00	102.80	102.85	103.45	103.70	105.15	103.65
23.....	103.70	104.05	107.40	104.60	104.45	103.25	102.85	103.15	103.45	104.60	105.40	103.35
24.....	103.60	104.45	107.05	104.20	105.20	103.25	102.85	103.85	103.35	104.45	105.05	103.75
25.....	103.45	103.90	107.10	104.40	105.70	103.10	103.10	103.20	103.60	104.30	104.65	104.30
26.....	103.55	104.55	109.20	104.10	105.55	103.35	102.95	103.00	102.75	104.85	104.55	104.05
27.....	103.00	104.05	*a*	104.80	105.40	102.95	103.35	102.55	103.10	105.30	104.35	104.10
28.....	105.75	103.60	*a*	104.50	105.15	103.65	103.10	103.05	102.85	105.00	104.35	103.05
29.....	105.90	......	*a*	105.10	103.05	104.50	102.85	103.30	102.80	104.85	104.05	104.80
30.....	105.30	......	*a*	104.65	103.55	103.85	103.05	103.25	102.75	104.75	104.65	103.35
31.....	105.10	......	110.00	......	103.50	......	102.90	103.60	......	104.60	......	102.70

a No record

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above Dam at Fort Miller, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	116.15	116.35	115.50	*a*	116.83	117.48	115.58	114.74	114.34	114.49	115.44	115.39
2.....	116.10	117.05	115.80	*a*	116.63	117.13	114.78	114.44	114.24	114.34	115.69	115.29
3.....	116.20	116.75	115.80	*a*	116.53	116.93	115.13	115.44	114.59	114.04	115.64	115.14
4.....	116.95	116.70	115.40	*a*	116.88	116.73	115.68	114.34	114.39	114.39	115.34	115.24
5.....	117.45	116.60	115.50	118.63	116.43	116.63	115.68	114.54	114.44	115.29	115.09	115.19
6.....	117.15	116.70	115.30	118.83	116.08	116.33	115.63	114.64	114.29	114.29	114.99	115.24
7.....	116.90	116.45	115.30	118.53	116.53	116.28	114.73	114.79	114.69	114.79	115.04	115.74
8.....	116.95	116.40	115.30	118.08	116.03	116.08	115.33	114.34	114.19	114.64	114.94	115.89
9.....	117.25	116.35	115.50	117.83	116.48	115.83	114.93	114.49	113.89	114.44	115.49	116.14
10.....	117.20	115.60	115.90	117.43	116.13	115.58	114.93	115.09	114.24	114.79	115.69	116.14
11.....	116.85	115.20	116.10	117.43	116.23	115.58	115.03	114.19	114.04	114.59	117.29	116.04
12.....	117.15	115.50	116.10	117.43	115.63	115.38	115.08	114.39	114.34	115.04	117.24	115.84
13.....	116.95	115.20	116.15	117.58	115.63	115.08	115.48	114.44	114.34	113.99	116.94	115.69
14.....	116.85	115.50	116.65	117.48	115.83	115.13	114.83	114.44	114.94	114.64	116.69	116.14
15.....	116.65	115.40	117.55	117.18	116.03	115.58	114.98	114.39	113.94	114.59	116.19	115.74
16.....	116.50	115.85	118.10	117.18	115.78	114.78	115.53	114.59	114.29	114.64	116.49	115.74
17.....	116.55	115.60	117.75	117.18	115.78	114.88	115.93	114.89	114.29	114.39	115.84	115.79
18.....	116.75	115.45	117.55	117.13	116.08	114.93	115.83	114.39	114.39	114.69	115.89	115.64
19.....	117.30	115.50	117.50	116.98	115.83	114.73	116.03	114.39	114.29	115.19	115.74	115.39
20.....	117.35	115.40	117.50	117.08	115.28	114.88	115.68	114.39	114.54	114.14	115.74	115.04
21.....	117.55	115.45	117.75	116.83	115.58	115.23	115.53	114.24	115.09	114.99	115.84	115.79
22.....	117.60	115.25	118.25	116.83	115.88	115.53	115.58	114.29	114.14	115.14	116.09	114.79
23.....	117.60	116.10	118.40	116.93	115.53	114.88	115.78	114.24	115.84	115.44	116.29	115.14
24.....	117.55	115.85	118.15	116.53	116.43	115.23	115.88	114.79	115.09	115.54	116.04	115.19
25.....	117.35	115.60	118.25	116.78	117.13	115.43	115.88	114.34	115.04	115.39	115.84	115.49
26.....	117.45	115.65	120.10	116.53	116.78	115.38	115.83	114.24	114.79	115.99	115.74	115.34
27.....	117.10	115.75	*a*	116.98	116.68	115.68	115.78	114.34	114.94	116.04	115.54	115.49
28.....	117.05	115.60	*a*	116.48	116.53	115.63	115.78	115.19	114.84	116.09	115.54	115.24
29.....	117.10	......	*a*	117.03	117.33	115.98	115.83	114.89	114.24	115.99	115.44	114.49
30.....	116.65	......	*a*	116.68	117.63	115.13	115.88	114.39	114.29	115.84	115.54	114.79
31.....	116.40	......	*a*	......	117.53	......	115.93	114.49	......	115.74	......	114.64

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above Crocker's Reef Dam, near Moseskill, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	120.41	120.36	120.11	123.51	120.76	121.36	119.76	119.61	119.46	119.51	120.31	120.11
2.....	120.51	120.36	119.71	123.06	120.36	121.16	119.51	119.61	119.41	119.56	119.96	119.91
3.....	120.61	120.46	120.11	122.76	120.56	120.96	119.71	119.51	119.56	119.46	120.21	119.96
4.....	121.26	120.46	119.91	122.51	120.46	120.61	119.56	119.56	119.61	119.46	119.96	120.06
5.....	120.96	120.41	119.96	122.51	120.41	120.41	119.71	119.71	119.56	119.46	119.86	119.91
6.....	121.16	120.31	119.96	122.76	120.21	120.21	119.51	119.61	119.51	119.46	119.71	119.91
7.....	121.16	120.16	119.81	122.46	120.36	120.36	119.51	119.71	119.46	119.51	119.71	119.91
8.....	121.16	120.16	119.76	122.06	120.11	119.86	119.71	119.71	119.41	119.41	119.86	120.51
9.....	121.41	119.61	119.61	121.76	120.46	119.96	119.56	119.71	119.46	119.46	119.71	120.71
10.....	121.21	120.01	120.31	121.41	120.31	119.91	119.61	119.51	119.51	119.56	120.66	120.61
11.....	121.21	119.96	120.71	121.26	119.76	119.81	119.61	119.56	119.56	119.56	122.01	120.71
12.....	121.16	120.01	120.71	121.26	119.81	119.71	119.51	119.56	119.51	119.46	121.76	120.46
13.....	121.11	119.86	120.66	121.26	119.86	119.41	119.41	119.56	119.56	119.56	121.41	119.91
14.....	121.06	119.86	121.01	121.41	119.81	119.36	119.41	119.61	119.46	119.61	121.11	119.96
15.....	120.91	119.96	122.06	121.21	119.91	119.41	119.46	119.61	119.41	119.66	120.76	120.36
16.....	120.81	119.56	122.21	121.21	119.91	119.41	119.71	119.66	119.46	119.66	120.46	120.26
17.....	120.96	119.81	122.01	121.21	120.01	119.36	119.66	119.56	119.51	119.71	120.51	120.11
18.....	121.26	119.86	121.81	121.06	119.81	119.31	119.66	119.51	119.56	119.71	120.46	120.06
19.....	121.46	119.81	121.86	120.96	119.86	119.26	119.61	119.56	119.51	119.66	120.36	120.06
20.....	121.71	119.91	121.86	120.86	119.81	119.36	119.56	119.61	119.61	119.61	120.26	120.01
21.....	122.01	119.91	122.26	120.76	119.86	119.41	119.41	119.56	119.46	119.71	120.26	119.71
22.....	122.11	120.03	122.51	120.71	119.91	119.51	119.56	119.56	119.46	119.96	120.76	119.86
23.....	122.01	120.11	122.71	120.81	119.96	119.56	119.56	119.56	119.66	120.26	120.46	120.01
24.....	122.01	120.16	122.61	120.56	120.06	119.61	119.66	119.46	119.86	120.36	120.66	119.96
25.....	121.76	120.06	122.66	120.66	120.66	119.66	119.76	119.36	119.76	120.11	120.46	119.91
26.....	121.46	120.11	125.61	120.36	120.76	119.71	119.66	119.46	119.61	120.16	120.36	120.01
27.....	121.36	120.11	128.36	120.56	120.56	119.66	119.51	119.56	119.71	120.76	120.31	120.06
28.....	121.16	120.11	129.56	120.31	120.61	119.71	119.61	119.66	119.46	120.61	120.16	119.71
29.....	121.06	......	127.81	120.86	121.51	119.76	119.66	119.66	119.36	120.61	119.91	119.71
30.....	121.46	......	125.36	120.66	121.61	119.61	119.61	119.56	119.51	120.51	119.66	119.71
31.....	120.86	......	123.91	......	121.56	......	119.61	119.66	......	120.36	......	119.66

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at Bridge St., Fort Edward, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	120.87	120.87	120.57	126.62	120.87	123.07	119.87	119.77	119.57	119.57	119.87	120.47
2.....	120.87	120.57	120.87	125.32	120.87	122.37	119.87	119.67	119.67	119.52	119.77	120.37
3.....	121.52	120.57	120.87	124.77	120.87	121.52	119.87	119.32	119.77	119.87	119.87	119.97
4.....	121.87	120.87	120.87	125.32	120.97	121.32	119.87	119.37	119.77	119.87	119.77	119.87
5.....	122.17	121.07	120.87	125.87	120.87	120.87	119.87	119.57	119.67	119.87	119.67	119.87
6.....	122.52	120.97	120.57	125.47	120.87	120.87	119.42	119.67	119.47	119.77	119.97	120.07
7.....	122.87	120.87	120.42	125.32	120.67	120.57	119.47	119.67	119.67	119.37	119.97	119.77
8.....	122.87	120.87	120.37	124.77	120.87	120.37	119.87	119.67	119.67	119.57	119.77	119.97
9.....	122.57	120.57	120.37	122.87	120.87	120.22	119.77	119.77	119.42	119.77	121.17	120.32
10.....	122.27	120.67	120.77	123.07	120.57	119.97	119.67	119.37	119.37	119.87	122.97	120.37
11.....	121.97	120.67	120.87	125.27	120.37	119.87	119.77	119.57	119.37	119.87	124.37	120.37
12.....	121.77	120.47	120.87	122.17	120.32	119.87	119.67	119.87	119.42	119.47	123.62	120.32
13.....	121.37	120.42	121.07	122.57	120.27	119.77	119.77	119.87	119.67	119.77	122.57	119.97
14.....	121.32	120.32	121.57	122.87	120.27	119.87	119.87	119.87	119.67	119.87	121.62	119.87
15.....	121.22	120.27	123.07	122.12	120.27	119.47	119.42	119.87	119.57	119.87	120.42	119.87
16.....	121.77	120.42	123.87	122.47	120.27	119.67	119.67	119.87	119.47	119.87	120.52	120.07
17.....	122.52	120.57	123.57	122.27	120.27	119.67	119.67	119.47	119.47	119.77	120.87	119.97
18.....	122.97	120.67	123.27	121.87	120.07	119.67	119.77	119.57	119.77	119.57	120.67	119.97
19.....	123.52	120.67	122.87	121.87	120.27	119.87	119.57	119.67	119.87	119.47	120.87	120.27
20.....	123.77	120.87	123.17	121.87	120.27	119.77	119.57	119.67	119.87	119.57	120.87	119.97
21.....	123.87	120.87	123.62	121.37	120.32	119.67	119.67	119.42	119.57	119.77	120.87	119.87
22.....	123.87	120.87	124.22	121.37	120.37	119.57	119.57	119.37	119.52	120.07	120.87	120.07
23.....	123.87	120.67	124.77	121.32	120.42	119.67	119.77	119.57	119.87	120.67	120.97	120.07
24.....	123.52	120.77	125.07	120.87	120.67	119.67	119.87	119.42	119.87	120.37	121.17	119.97
25.....	122.97	120.87	126.17	121.37	120.87	119.77	119.77	119.77	119.87	120.87	121.17	119.87
26.....	122.77	120.87	130.47	120.97	121.27	119.67	119.57	119.77	119.77	120.87	120.87	119.87
27.....	122.62	120.67	135.77	120.87	121.57	119.42	119.37	119.67	119.37	120.57	120.87	119.87
28.....	121.87	120.67	135.27	121.07	121.67	119.57	119.57	119.67	119.42	120.42	120.97	119.67
29.....	121.52	......	133.37	121.07	122.42	119.67	119.67	119.67	119.67	120.37	120.97	119.77
30.....	121.37	......	129.22	120.87	122.87	119.67	119.57	119.67	119.67	120.32	120.57	119.87
31.....	121.17	......	126.87	......	123.17	......	119.47	119.37	......	120.27	......	119.87

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above Feeder Dam at Glens Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	282.22	282.67	281.67	284.52	282.83	283.58	281.48	281.63	280.98	281.23	282.63	282.38
2	282.27	283.02	281.27	285.87	282.78	283.28	281.38	281.68	281.78	281.18	282.33	281.98
3	282.22	283.22	281.77	285.47	282.68	283.08	281.38	281.68	281.83	281.18	282.58	281.93
4	283.12	282.12	281.62	284.97	282.58	282.78	281.18	281.98	281.68	281.33	281.98	281.98
5	283.02	282.02	281.52	285.07	282.48	282.58	281.38	282.03	281.33	281.23	281.78	282.13
6	283.12	281.97	281.37	282.98	282.43	282.43	281.03	282.03	281.23	281.63	281.98	282.28
7	283.17	281.82	281.27	282.58	282.43	282.33	281.43	281.78	280.88	281.53	281.88	281.98
8	283.52	281.72	280.97	282.18	282.53	282.13	281.43	281.93	280.73	281.43	281.53	282.88
9	283.82	281.72	281.02	284.33	282.53	282.13	281.28	281.78	281.38	281.53	281.53	283.03
10	283.37	281.77	281.92	283.63	282.23	281.98	281.28	281.13	281.38	281.48	284.78	282.88
11	283.12	281.72	282.52	283.43	282.03	281.98	281.28	281.48	281.48	281.28	285.03	282.78
12	283.02	281.42	282.17	283.63	281.98	281.83	281.03	281.83	281.43	280.88	284.68	282.08
13	283.27	281.52	282.22	283.48	282.03	281.88	280.63	281.98	281.33	281.38	284.08	282.23
14	282.92	281.62	283.07	283.48	282.03	281.68	281.23	281.93	281.93	281.43	283.78	282.33
15	282.77	281.47	283.72	282.58	282.03	281.78	281.33	281.98	281.03	281.48	283.53	282.63
16	282.72	281.32	284.12	283.58	281.98	281.73	281.43	281.68	281.43	281.38	283.13	282.53
17	282.67	281.87	284.07	283.33	281.98	281.68	281.38	281.08	281.38	281.48	282.88	282.43
18	282.92	281.57	283.87	283.48	281.93	281.73	281.48	281.38	281.38	281.38	282.63	282.53
19	282.52	281.52	283.72	283.33	282.03	281.68	281.53	281.73	281.38	280.93	282.48	282.23
20	283.67	281.32	283.87	283.23	281.93	281.68	280.68	281.58	281.38	281.33	282.38	282.03
21	283.92	281.57	284.22	283.03	281.93	281.63	281.13	281.58	281.23	281.93	282.78	281.73
22	284.02	281.47	284.77	282.98	281.93	281.43	281.48	281.63	281.83	282.28	283.13	282.03
23	283.97	281.97	284.82	282.98	282.23	281.78	281.48	281.73	281.08	282.68	282.98	282.18
24	283.82	282.22	284.67	282.73	282.83	281.73	281.48	281.08	282.23	282.53	282.93	281.98
25	283.72	281.92	284.72	282.93	282.98	281.73	281.43	281.08	281.88	282.33	282.78	281.63
26	283.47	281.82	287.92	282.78	282.83	281.68	281.23	281.68	281.68	282.48	282.83	281.88
27	283.32	281.72	289.77	282.83	282.88	281.73	281.88	281.78	281.33	283.18	282.53	281.83
28	283.12	281.52	290.67	282.73	282.73	281.68	281.43	281.73	281.03	283.18	282.43	281.48
29	283.32	......	289.42	282.88	283.55	281.33	281.58	281.88	281.18	282.98	282.18	281.73
30	282.92	......	288.07	282.88	283.88	281.78	281.53	281.88	281.43	282.83	281.88	281.78
31	282.77	......	283.77	......	283.83	......	281.48	281.28	......	282.63	......	281.93

RECORDS OF DISCHARGE, UPPER HUDSON RIVER AND TRIBUTARIES.

In the following pages will be found tables giving the daily discharge and monthly run-off of the upper Hudson river and its tributaries at a considerable number of locations. These records are derived from various sources. Several important records, including two records of Hudson river at Mechanicville, are maintained and furnished by private corporations. Other records are maintained by this Department and others by the State Conservation Commission and the United States Geological Survey. Some of these are maintained in coöperation with private corporations. Some of the records are at dams and mills and others are at current-meter stations. At some, the conditions are known to be good; at others they are poor at certain seasons of the year. Some of these records are of long duration, notably the record at Mechanicville, established in December, 1888, and the record at Fort Edward, established in December, 1895. Most of the records are, however, of much shorter duration and it is only within the past two or three years that a sufficient number of gaging stations has been maintained in this basin to enable reliable comparisons of the different records to be made. The results of gagings at many of these stations have been available for only one or two years. A study of the results has been undertaken, with a view to determining the relative accuracy of the different records, but it has not been carried far enough at this time to enable final conclusions to be drawn. It appears quite certain, however, that the record of the West Virginia Pulp & Paper Company's dam in Mechanicville is substantially accurate in its present form, although this record in earlier years was probably somewhat in error in regard to high-water conditions, owing to the use of a less reliable formula for discharge over the dam than that at present applied. It also appears that the record at Crocker's Reef dam, maintained by this Department, beginning in 1907, is probably very reliable, as the conditions are exceptionally good. It has been known for several years that the calculated discharge at Fort Edward was probably somewhat in error, especially during the low-water season. In view of the fact that no reliable basis existed for determining the correct discharge and making the necessary modifications in this record, it has seemed best to continue the computation of the record in the same manner pursued from its inception. In applying the Fort Edward data it should be understood that the low-water flow as recorded is probably somewhat excessive throughout the entire record.

As to other records of the Hudson river and tributaries it can only be said at this time that they are probably more consistent than would appear from a direct comparison. In some cases where the recorded run-off per square mile at adjacent stations differs, it does not necessarily follow that either one of the records is incorrect. There are wide variations in the hydrological conditions in different portions of the upper Hudson drainage basin. For example, the topography, culture, geology and soil for the Hudson and its tributaries above North Creek are all essentially different from the corresponding features of the drainage basin of Saratoga lake outlet. The hydrological features of both the above mentioned basins are essentially different from the corresponding features of the drainage basins of the Battenkill and Hoosic streams. The conditions are somewhat further complicated by diversion from the Hudson river to supply the Champlain canal through Glens Falls feeder and at Northumberland dam.

HUDSON RIVER ABOVE DAM OF ADIRONDACK ELECTRIC POWER CORPORATION NEAR MECHANICVILLE, N. Y.

This gage was established August 18, 1905, by this Department. The gage is a vertical staff divided to feet and tenths and reading from zero to 16 feet. It is attached to the upstream face of the river wall at the right-hand end of the line of waste-gates forming a continuation of the dam. Readings are taken at 8. A. M. and 5 P. M. by E. H. Stickney. The gage zero is at elevation 43.00. A record is kept in the adjoining power-plant, showing the use of water by the turbine wheels, and also the waste over the dam, through gates, etc.

The accompanying tables show the discharge as calculated at the power-plant. The dam is of the ogee type, but the discharge is calculated by the East Indian Engineers' formula for dams with broad crest.

The record of the flow of Hudson river at this plant was begun October 1, 1897.

Acknowledgment is made to the Adirondack Electric Power Corporation for furnishing copies of this record for the earlier years during which it was kept.

Mean Daily Discharge, Second-feet, of Hudson River at Dam of Adirondack Electric Power Corporation, near Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1......	10,060	11,476	8,475	38,210	11,560	*14,016	3,079	1,801	1,326	1,996	5,820	4,924
2......	9,995	*10,878	*5,617	33,798	10,837	13,103	2,327	1,648	995	2,266	*4,401	4,883
3......	10,885	12,104	7,182	28,016	10,503	12,668	1,757	*1,550	1,133	1,218	5,748	5,127
4......	13,748	8,448	5,526	24,801	*9,072	10,723	1,433	1,848	1,600	1,221	4,422	4,794
5......	*12,302	7,612	5,028	21,516	9,812	9,076	1,824	1,559	1,168	*1,146	4,146	4,858
6....	13,619	6,824	4,986	*25,465	6,543	7,933	*1,476	1,879	1,607	1,513	2,942	4,361
7......	*a*	6,557	5,517	25,754	7,472	6,862	2,017	1,711	*1,192	1,796	3,631	*4,329
8......	17,964	5,568	4,019	22,577	6,163	*5,463	1,776	1,519	1,333	1,960	3,010	8,999
9......	17,510	*4,088	*2,982	19,991	7,005	6,857	2,160	1,355	1,333	1,492	*1,986	10,365
10......	15,558	6,761	8,444	17,344	6,111	5,711	2,214	*1,400	1,430	1,600	12,420	9,894
11......	14,658	5,698	10,220	17,135	*5,287	4,457	1,745	1,373	688	1,517	18,375	6,424
12......	*15,719	4,575	9,926	19,957	5,244	4,532	2,011	1,417	853	*1,754	16,890	7,940
13......	14,442	4,347	9,152	*19,116	4,338	4,914	*1,025	1,181	663	1,800	14,901	5,526
14......	14,435	4,093	11,804	18,016	5,025	3,353	1,517	1,263	*833	1,985	12,952	*5,965
15......	11,230	4,134	21,015	16,856	5,176	*2,616	1,651	1,335	1,007	2,275	10,721	8,050
16......	11,582	*3,177	*21,210	16,821	5,184	3,535	1,957	1,219	1,151	1,648	*8,264	7,210
17......	13,660	5,337	20,140	15,407	4,765	4,035	2,210	*1,244	920	1,567	8,206	5,894
18......	17,891	5,208	18,750	15,533	*4,783	3,207	1,578	1,353	1,240	1,575	6,814	6,202
19......	*20,300	4,522	18,205	15,015	5,610	3,420	1,914	1,136	1,392	*1,555	5,879	5,586
20......	21,514	4,087	19,820	*13,612	4,723	3,303	*1,432	1,385	1,238	1,619	6,206	5,241
21......	22,793	3,903	22,440	13,535	4,717	3,045	1,438	1,504	*1,472	2,283	6,650	*3,685
22......	23,114	4,560	25,404	13,257	4,607	*2,183	1,375	1,240	1,209	3,476	8,315	5,149
23......	21,911	*5,044	*24,233	12,345	6,672	2,953	1,452	1,023	1,553	3,116	*7,163	5,729
24......	21,911	8,603	24,923	11,934	11,534	3,357	1,670	*793	1,825	3,905	8,167	5,173
25......	19,758	6,930	20,274	11,418	*11,302	3,133	1,925	1,014	3,159	4,405	6,660	4,083
26......	*18,104	5,844	42,633	11,173	12,212	3,230	1,858	1,214	2,051	*5,188	6,469	3,829
27......	18,471	5,745	74,325	*11,017	11,161	3,230	*744	1,112	2,004	7,153	5,342	5,807
28......	16,057	6,716	90,000	11,552	11,314	3,530	1,814	1,012	*1,580	9,950	5,147	*4,160
29......	*a*	......	65,244	12,951	15,992	*1,889	1,011	1,203	1,603	8,270	4,523	3,203
30......	11,319	......	*65,800	11,765	15,572	2,204	1,593	933	1,284	7,550	*3,736	4,041
31......	10,768	......	41,633	......	15,432	.. ....	1,707	*1,075	......	6,962	....	4,005
Mean...	15,909	6,172	23,492	18,335	8,254	5,298	1,745	1,339	1,366	3,090	7,330	5,659

a No record. * Sunday.

Monthly Discharge of Hudson River at Dam of Adirondack Electric Power Corporation, near Mechanicville, N. Y.

[Drainage area, 4,570 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	23,114	9,995	15,909	3.48	4.01
February	12,104	3,177	6,172	1.35	1.41
March	90,000	2,982	23,492	5.14	5.93
April	38,210	11,017	18,335	4.01	4.47
May	15,992	4,338	8,254	1.81	2.09
June	14,016	1,889	5,298	1.16	1.29
July	3,079	744	1,745	0.382	0.44
August	1,879	793	1,339	0.293	0.338
September	3,159	663	1,366	0.299	0.334
October	9,950	1,146	3,090	0.676	0.779
November	18,375	1,986	7,330	1.60	1.78
December	10,365	3,203	5,659	1.24	1.43

HUDSON RIVER AT WEST VIRGINIA PULP AND PAPER CO.'S MILL, MECHANICVILLE, N. Y.

This gaging station is located at the dam of the West Virginia Pulp and Paper Company in the village of Mechanicville about 1¼ miles below the mouth of the Hoosic river and 19 miles above the mouth of the Mohawk river. The drainage area at this point is 4,500 square miles.

The gage heights are maintained by means of an automatic recording gage. Previous to the summer of 1910 the discharge at this place was determined from two daily gage readings, giving the elevation of the water on the crest of the Paper Co.'s dam, together with a continuous record of the run of the water wheels in the paper mill adjoining the dam. In 1904 the dam was raised and a concrete crest and apron were added, so that it now has an ogee section. A discharge curve for this dam has been calculated from coefficients derived from United States Geological Survey experiments on dams of a similar type.

The maximum discharge during the flood of the spring of 1913 occurred at 6 A. M. on March 28, when the discharge reached 118,000 second-feet, or 26.2 second-feet per square mile of drainage area. This record is computed and furnished by Mr. R. P. Bloss, Engineer of the West Virginia Pulp and Paper Company.

Mean Daily Discharge, Second-feet, of Hudson River at West Virginia Pulp and Paper Co.'s. Mill, Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	10,481	6,095	7,027	39,274	10,072	9,885	2,999	1,332	536	1,143	5,005	5,607
2.....	6,687	8,382	4,487	32,861	7,921	9,974	2,111	1,347	1,906	1,511	*a*	4,101
3.....	12,159	6,868	6,653	22,765	8,745	7,722	1,821	803	948	1,259	5,138	4,254
4.....	15,178	6,233	6,712	23,679	7,384	7,100	6,221	1,462	981	998	4,487	3,968
5.....	11,968	6,356	4,722	23,437	9,330	5,871	586	1,800	949	*a*	3,224	4,564
6.....	14,259	6,321	4,090	25,833	5,652	4,289	516	1,316	1,184	1,442	3,559	4,568
7.....	14,197	5,414	5,078	24,789	12,144	4,695	2,862	1,543	*a*	1,438	3,693	1,479
8.....	16,567	4,404	2,992	21,300	4,980	1,427	1,821	1,420	1,257	1,820	3,279	8,240
9.....	15,269	6,740	2,954	17,082	7,105	4,868	1,842	1,191	1,267	1,174	1,433	7,194
10.....	14,012	4,782	7,642	15,781	5,906	4,138	2,091	478	970	1,192	10,169	7,33'
11.....	13,453	5,131	8,211	13,761	3,938	4,021	1,737	1,239	725	1,043	19,215	7,200
12.....	13,669	4,782	9,026	9,692	7,312	3,226	1,706	1,006	969	980	16,085	6,431
13.....	11,574	3,508	7,983	16,664	4,087	3,894	*a*	995	894	1,689	13,419	4,655
14.....	10,308	3,493	9,796	19,871	3,895	2,613	1,588	1,012	502	1,257	11,964	4,706
15.....	10,399	3,815	24,859	14,542	4,097	765	1,883	1,016	1,247	1,271	9,445	7,538
16.....	10,038	5,336	22,755	14,508	4,175	3,450	1,699	1,081	735	1,296	*a*	5,544
17.....	10,330	4,165	21,916	12,694	3,848	2,548	2,445	574	735	1,315	7,871	4,778
18.....	13,039	4,670	18,007	12,946	3,700	8,554	1,158	1,369	735	1,283	6,617	5,517
19.....	12,786	4,525	17,041	16,176	4,990	2,542	1,667	1,096	725	560	5,847	5,614
20.....	14,303	4,407	17,415	*a*	3,185	2,844	924	1,018	912	1,647	4,896	4,429
21.....	16,775	4,381	20,934	14,806	3,862	3,165	1,640	801	170	1,469	5,768	4,261
22.....	17,221	4,478	*a*	13,301	3,862	861	1,514	1,284	1,323	2,140	7,195	5,143
23.....	14,857	*a*	*a*	15,097	3,877	3,571	1,484	1,060	1,145	4,447	4,434	3,862
24.....	15,511	7,675	25,059	8,788	9,660	2,448	1,808	213	1,265	3,756	7,470	4,805
25.....	14,473	6,051	23,404	8,869	9,314	2,478	1,772	1,146	2,736	3,783	6,034	4,152
26.....	11,327	5,459	46,591	7,868	9,756	2,138	2,193	995	2,316	4,309	5,404	3,960
27.....	13,317	5,778	77,862	5,357	9,351	2,353	414	1,027	1,632	10,553	5,263	4,460
28.....	12,351	6,126	113510	6,912	4,318	3,063	2,285	1,007	992	9,203	5,147	2,005
29.....	10,294	......	112918	10,075	12,421	1,532	1,191	964	1,653	7,022	3,241	3,026
30.....	8,407	......	60,269	7,428	12,956	1,866	*a*	960	945	6,738	3,463	4,349
31.....	9,208	......	42,484	......	12,796	......	1,115	686	......	5,753	......	2,364
Mean...	12,723	5,384	25,255	16,419	6,924	3,930	1,831	1,072	1,116	2,783	6,742	4,842

a No record.

Monthly Discharge of Hudson River at West Virginia Pulp and Paper Co.'s Mill, Mechanicville, N. Y.
[Drainage area, 4,500 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square. mile.	Depth in inches on drainage area.
1913.					
January	17,221	6,687	12,723	2.83	3.26
February	8,382	3,493	5,384	1.20	1.25
March	113,510	2,954	25,255	5.61	6.47
April	39,274	5,357	16,419	3.65	4.07
May	12,956	3,185	6,924	1.54	1.78
June	9,974	765	3,930	0.873	0.974
July	6,221	414	1,831	0.407	0.469
August	1,800	213	1,072	0.238	0.274
September	2,736	170	1,116	0.248	0.277
October	10,553	560	2,783	0.618	0.712
November	19,215	1,433	6,742	1.50	1.67
December	8,240	1,479	4,842	1.08	1.24

HUDSON RIVER AT CROCKER'S REEF DAM.

A gage was established above Crocker's Reef 450 feet upstream from the head of Thompson island April 11, 1904, by J. A. O'Connor, for this Department. The reef has since been submerged by construction of a dam for the Barge canal. The gage is a painted scale subdivided to tenths of a foot from zero to 18 feet and is attached to the downstream side of a large elm tree. The gage zero is at elevation 115.06. The regular observer is John H. Donnelly, Jr.

Crocker's Reef dam crosses the Hudson river at the upper end of Thompson island about six miles below Fort Edward. This dam, which was constructed in connection with the New York Barge canal, is of concrete masonry and has an ogee cross-section. The crest is at elevation 119.00, Barge canal datum, and was trowelled down to a uniform level during construction. This was done with care and accuracy, to provide for the use of the dam as a gaging weir. The dam was completed August 27, 1907. A record of the stage of the stream at a distance of about 1,200 feet upstream has been maintained since April 11, 1904. The mean daily elevations for the years 1904 to 1908, inclusive, are contained in the State Engineer's report for 1908, pages 641–644. Computations of discharge have been made, beginning September 1, 1907.

The entire flow of the Hudson river passes over this dam, excepting what is carried past the dam in the present Champlain canal. The accompanying tables show the flow of the river proper, not including the flow in Champlain canal. The results of gagings to determine the flow in Champlain canal are also given. The discharge over the dam has been computed, using a variable coefficient, the coefficient used being 3.09 for low stages of the stream, but increasing as depth on crest increases. It is assumed that the natural slope in the channel from the gage down to the dam is approximately equal to the head due to velocity of approach and that the two elements counterbalance, no separate correction for velocity of approach being made.

At higher stages of the stream the Crocker's Reef dam becomes submerged and the discharge is less than for an unsubmerged weir with the same depth on the crest. The flow for higher stages has been reduced to take into account the effect of submergence.

Mean Daily Discharge, Second-feet, of Hudson River at Crocker's Reef Dam.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1......	3,990	3,770	2,750	25,465	5,775	*9,350	1,550	1,100	702	830	3,550	2,750
2......	4,482	*3,770	*1,400	22,022	3,770	8,100	830	1,100	575	965	*2,199	2,050
3......	4,950	4,236	2,750	19,825	4,716	6,879	1,400	*830	965	702	3,150	2,199
4......	8,700	4,236	2,050	18,015	*4,236	4,950	965	965	1,100	702	2,199	2,549
5......	*6,879	3,990	2,199	18,015	3,990	3,990	1,400	1,400	965	*702	1,875	2,050
6......	8,100	3,550	2,199	*19,825	3,150	3,150	*830	1,100	830	702	1,400	2,050
7......	8,100	2,950	1,700	17,608	3,770	3,770	830	1,400	*702	830	1,400	*2,050
8......	8,100	2,950	1,550	14,499	2,750	*1,875	1,400	1,400	575	575	1,875	4,482
9......	9,700	*1,100	*1,100	12,225	4,236	2,199	965	1,400	702	702	*1,400	5,500
10......	8,400	2,348	3,550	9,700	3,550	2,050	1,100	*830	830	965	5,225	4,950
11......	8,400	2,199	5,500	8,700	*1,550	1,700	1,100	965	965	965	14,098	5,500
12......	*8,100	2,348	5,500	8,700	1,700	1,400	830	965	830	*702	12,225	4,236
13......	7,800	1,875	5,225	*8,700	1,875	575	*575	965	965	965	9,700	2,050
14......	7,479	1,875	7,158	9,700	1,700	468	575	1,100	*702	1,100	7,800	*2,199
15......	6,600	2,199	14,499	8,400	2,050	*575	702	1,100	575	1,250	5,775	3,770
16......	6,050	*965	*15,650	8,400	2,050	575	1,400	1,250	702	1,250	*4,236	3,350
17......	6,879	1,700	14,098	8,400	2,348	468	1,250	*965	830	1,400	4,482	2,750
18......	8,700	1,875	12,600	7,479	*1,700	360	1,250	830	965	1,400	4,236	2,549
19......	*10,032	1,700	12,975	6,879	1,875	280	1,100	965	830	*1,250	3,770	2,549
20......	11,850	2,050	12,975	*6,325	1,700	468	*965	1,100	1,100	1,100	3,350	2,348
21......	14,098	2,050	16,050	5,775	1,875	575	575	965	*702	1,400	3,350	*1,400
22......	14,900	2 549	18,015	5,500	2,050	*830	965	965	702	2,199	5,775	1,875
23......	14,098	*2,750	*19,450	6,050	2,199	965	965	965	1,250	3,350	*4,236	2,348
24......	14,098	2,950	18,700	4,716	2,549	1,100	1,250	*702	1,875	3,770	5,225	2,199
25......	12,225	2,549	19,075	5,225	*5,225	1,250	1,550	468	1,550	2,750	4,236	2,050
26......	*10,032	2,750	41,900	3,770	5,775	1,400	1,250	702	1,100	*2,950	3,770	2,348
27......	9,350	2,750	63,800	*4,716	4,716	1,250	*830	965	1,400	5,775	3,550	2,549
28......	8,100	2,750	72,750	3,550	4,950	1,400	1,100	1,250	*702	4,950	2,950	*1,400
29......	7,479	......	59,400	6,325	10,364	*1,550	1,250	1,250	468	4,950	2,050	1,400
30......	10,032	......	*39,900	5,225	11,100	1,100	1,100	965	830	4,482	*1,250	1,400
31......	6,325	......	28,400	......	10,732	......	1,100	*1,250	......	3,770	......	1,250
Mean....	8,840	2,599	16,931	10,324	3,872	2,153	1,063	1,038	900	1,916	4,344	2,650

* Sunday.

Monthly Discharge of Hudson River at Crocker's Reef Dam.
[Drainage area, 2,959 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	14,900	3,990	8,840	2.99	3.45
February	4,236	965	2,599	0.878	0.914
March	72,750	1,100	16,931	5.72	6.60
April	25,465	3,550	10,324	3.49	3.89
May	11,100	1,550	3,872	1.31	1.51
June	9,350	280	2,153	0.728	0.812
July	1,550	575	1,063	0.359	0.414
August	1,400	468	1,038	0.351	0.405
September	1,875	468	900	0.304	0.339
October	5,775	575	1,916	0.648	0.747
November	14,098	1,250	4,344	1.47	1.64
December	5,500	1,250	2,650	0.896	1.03

HUDSON RIVER AT SPIER FALLS, N. Y.

This gaging station is located on the river road one-half mile below the power dam at Spier Falls and about 4½ miles below the mouth of the Sacandaga river. The drainage area at this point is 2,800 square miles.

The gage is of the recording hydrographic type. A sloping staff gage is also maintained. The automatic gage is located in a brick shelter beneath which is a brick lined well 3½ feet square and 21 feet deep. This well is connected with the river by a 4-inch cast iron pipe 78 feet long. A valve is set at the inside end of the pipe in order that the well may be drained and cleaned. Inside the well a hook gage is used for setting the automatic gage. The sloping staff gage is fastened to a small concrete pier 10 feet upstream from the automatic gage. The channel at this place consists of coarse gravel and boulders. Current meter discharge measurements are made from a car running on a cable. This cable is located about 1,000 feet downstream from the automatic gage and has a 450-ft. span.

During the winter backwater from ice prevails only during extremely cold weather. There is artificial control at this station caused by the Spier Falls power station upstream. This is indicated by the automatic gage readings.

The flood of March 25 to 30, 1913, reached a crest elevation of 18.29 feet at 12:25 A. M. on March 28. A discharge corresponding to this elevation was 89,107 second-feet, or 31.8 second-feet per square mile of drainage area.

This station is maintained by the U. S. Geological Survey in coöperation with several power users on the Hudson river.

Mean Daily Gage Height, in Feet, of Hudson River at Spier Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	4.39	5.07	3.73	11.59	......	6.75	2.82	2.51	1.74	1.91	3.95	3.86
2.....	4.35	4.47	3.17	10.40	......	6.21	2.66	2.82	2.35	1.85	3.69	3.50
3.....	4.37	4.21	3.59	9.46	4.98	5.72	2.64	2.32	2.25	2.09	3.86	3.61
4.....	5.83	4.23	3.28	8.88	4.97	5.29	2.53	2.55	1.95	2.38	3.43	3.46
5.....	5.68	4.13	3.29	9.22	4.52	4.91	2.59	2.47	1.85	2.25	3.37	3.51
6.....	5.76	3.84	3.32	9.35	4.73	4.55	2.05	2.38	1.75	2.92	3.34	3.74
7.....	5.86	3.21	3.21	8.99	4.45	4.39	......	2.28	0.72	2.50	3.13	3.48
8.....	6.01	3.85	3.05	8.22	4.82	4.03	......	2.32	1.83	2.31	2.78	4.75
9.....	5.93	3.61	2.98	7.83	4.72	3.93	2.49	2.11	1.83	2.45	2.76	4.98
10.....	5.91	3.60	3.99	6.82	4.12	3.87	2.47	1.41	1.92	2.37	7.30	4.74
11.....	5.87	3.53	4.52	6.58	3.84	3.82	2.38	2.31	1.98	2.22	8.01	4.66
12.....	5.84	3.38	4.29	6.52	3.66	3.47	......	2.29	1.96	1.46	7.45	3.95
13.....	5.54	3.39	4.49	6.74	3.78	3.41	......	2.31	1.83	......	6.69	3.90
14.....	5.40	3.29	6.13	6.66	3.87	3.18	2.58	2.30	0.83	......	6.05	4.12
15.....	5.33	3.71	7.41	6.83	3.93	2.99	2.70	2.38	1.90	2.40	5.48	4.10
16.....	5.23	3.19	8.18	6.27	3.77	3.14	2.71	2.11	1.91	2.37	4.96	3.88
17.....	5.25	3.65	7.99	6.59	3.78	3.05	2.57	1.28	1.83	2.32	4.64	3.83
18.....	5.80	3.56	7.58	6.14	3.73	3.13	2.70	2.08	1.88	2.45	......	3.84
19.....	6.78	3.27	7.29	6.08	3.64	3.14	2.49	2.11	2.02	1.46	3.94	3.72
20.....	7.04	3.22	7.53	6.00	3.58	3.18	1.74	1.95	2.12	2.65	3.99	3.43
21.....	7.60	3.49	8.10	5.62	3.62	3.04	2.47	2.01	1.69	3.22	4.62	2.87
22.....	7.65	3.31	9.32	5.76	3.61	2.63	2.49	2.12	2.68	3.84	5.13	3.51
23.....	7.47	3.93	9.31	5.45	4.53	3.25	2.43	2.01	3.04	4.06	4.89	3.51
24.....	7.34	3.95	......	5.16	5.48	3.11	2.48	0.91	3.41	3.86	4.73	3.39
25.....	6.99	3.89	......	5.33	5.72	3.13	2.51	2.04	2.85	3.76	4.37	......
26.....	6.66	3.69	......	5.31	5.59	3.14	2.25	2.12	2.53	4.29	4.18	3.51
27.....	6.37	3.60	17.19	5.12	5.30	3.17	1.71	2.21	2.22	4.86	4.05	3.20
28.....	5.83	3.42	18.09	5.55	5.45	3.03	2.55	2.31	1.18	4.79	3.87	2.08
29.....	5.38	......	16.15	5.49	6.91	2.59	2.70	2.25	2.31	4.53	3.78	2.91
30.....	5.09	......	13.78	5.62	7.41	3.20	2.37	2.22	2.20	4.30	3.30	2.70
31.....	4.91	......	11.92	......	7.15	......	2.34	1.49	......	4.08	......	3.40

NOTE. - Mean daily gage height computed from mean of 24 hourly readings for each day Gage heights not affected by ice during 1913. Record sheet for March 24 to 26 lost in flood.

Current-meter Discharge Measurements of Hudson River at Spier Falls, N. Y.

DATE.	Hydrographer.	Mean gaze reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Mar. 5	J. G. Mathers	3.60	10	0.2 & 0.8	2,200	292	1.26	2,770
Mar. 6	J. G. Mathers	3.99	10	0.2 & 0.8	2,340	297	1.49	3,470
Mar. 19	C. S. De Golyer	7.26	10	0.2 & 0.8	3,400	333	3.71	12,600
Mar. 19	C. S. De Golyer	7.16	10	0.2 & 0.8	3,400	333	3.74	12,700
Mar. 21	C. S. De Golyer	8.01	10	0.2 & 0.8	3,680	336	4.35	16,000
Mar. 22	C. S. De Golyer	9.38	10	0.2 & 0.8	4,140	343	5.40	22,300
Mar. 29	J. G. Mathers	16.46	10	*	6,400	397	10.78	69,000
April 9	C. S. De Golyer	8.16	10	0.2 & 0.8	3,700	336	4.34	16,400
June 28	C. S. De Golyer	3.18	10	0.2 & 0.8	2,110	311	1.00	2,120
Aug. 2	O. W. Hartwell	3.65	10	0.2 & 0.8	2,270	312	1.33	3,020
Aug. 12	G. J. Lyon	3.03	10	0.2 & 0.8	1,820	310	0.94	1,700
Aug. 14	G. J. Lyon	3.11	10	0.2 & 0.8	1,920	311	0.97	1,860
Aug. 16	G. J. Lyon	2.24	5	0.2 & 0.8	1,570	301	0.50	789
Aug. 17 *a*	G. J. Lyon	0.84	10	0.2 & 0.8	255	105	0.98	198
Aug. 17 *a*	G. J. Lyon	1.58	5	0.2 & 0.8	324	128	1.28	413
Aug. 17 *a*	G. J. Lyon	0.72	5	0.2 & 0.8	215	93	0.40	85.6
Aug. 17 *a*	G. J. Lyon	0.72	5	0.2 & 0.8	216	93	0.41	87.6
Aug. 18	G. J. Lyon	2.74	5	0.2 & 0.8	1,750	355	0.79	1,390
Aug. 31 *b*	G. J. Lyon	0.78	4	0.6	66.7	56	1.49	99.4

* Surface velocity. *a* Measurement made from boat, 1,200 feet above gage. *b* Measurement made by wading 1,500 feet above gage.

Mean Daily Discharge, Second-feet, of Hudson River at Spier Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1	4,240	5,880	2,980	33,800	7,650	*11,100	1,560	1,350	638	792	3,350	3,210
2	4,090	*4,420	*2,050	27,700	7,800	9,310	1,460	1,750	1,220	755	*2,860	2,610
3	4,220	3,880	2,700	22,700	5,680	7,750	1,480	*972	1,070	957	3,220	2,800
4	8,100	3,900	2,260	19,800	*5,670	6,510	1,340	1,320	822	1,260	2,420	2 570
5	*7,640	3,760	2,280	23,200	4,560	5,480	1,240	1,280	738	*906	2,510	2,680
6	7,890	3,160	2,330	*24,200	5,100	4,720	*820	1,160	640	1,760	2,420	2,940
7	8,210	2,930	2,130	20,500	4,400	4,250	1,620	1,090	*156	1,380	2,070	*2,550
8	8,670	3,190	2,020	16,900	5,400	*3,500	1,420	1,140	748	1,160	1,750	5,100
9	8,410	*2,720	*1,740	15,400	5,010	3,310	1,310	899	748	1,320	*1,560	5,670
10	8,350	2,760	3,440	11,400	3,680	3,190	1,260	*383	785	1,230	13,300	5,080
11	8,210	2,680	4,550	10,600	*3,130	3,120	1,200	1,030	837	1,050	16,000	4,890
12	*8,150	2,390	4,030	11,300	2,790	2,490	1,340	1,090	817	*442	13,700	3,380
13	7,240	2,590	4,270	*11,100	3,010	2,390	*610	1,130	695	1,230	11,100	3,250
14	6,810	2,360	9,370	10,900	3,200	2,060	1,330	1,110	*151	1,230	8,780	*3,690
15	6,630	2,350	13,500	11,400	3,380	*1,730	1,500	1,180	783	1,240	7,070	3,650
16	6,350	*2,090	*16,800	9,460	3,000	2,000	1,520	892	800	1,240	*5,610	3,260
17	6,390	2,810	15,600	10,600	3,030	1,930	1,350	*358	755	1,190	....	3,160
18	8,010	2,680	14,200	9,100	*2,880	2,050	1,600	899	775	1,240	....	3,160
19	*11,200	2,270	13,100	8,880	2,770	2,050	1,140	942	912	*401	3,360	2,990
20	12,200	2,120	14,000	*8,660	2,660	2,150	*579	790	946	1,550	3,450	2,510
21	14,300	2,460	16,400	8,000	2,920	1,890	1,250	870	*569	2,180	4,820	*1,600
22	14,500	2,310	22,000	8,000	2,720	*1,310	1,320	978	1,480	3,300	6,090	2,690
23	13,800	*3,330	*22,000	7,000	4,770	2,150	1,270	812	1,930	3,580	*5,440	2,810
24	13,300	3,360	35,500	6,170	7,060	1,990	1,280	*196	2,510	3,210	5,050	2,660
25	12,000	3,070	49,000	6,630	*7,740	2,060	1,280	865	1,630	3,000	4,230	2,510
26	*10,800	2,880	62,400	6,600	7,370	2,040	1,020	933	1,460	*4,080	3,820	2,360
27	9,820	2,720	76,200	*6,060	6,520	2,120	*571	1,060	1,020	5,370	3,540	2,080
28	8,190	2,440	84,200	7,410	6,770	1,880	1,280	1,170	*301	5,200	3,220	*830
29	6,770	....	67,000	7,100	11,700	*1,250	1,590	1,100	1,160	4,580	3,040	1,860
30	5,960	....	*48,900	7,480	14,100	2,170	1,150	1,070	1,060	4,070	*2,220	1,620
31	5,490		36,600		13,200		1,130	*425	....	3,600	....	2,650

* Sunday.

Monthly Discharge of Hudson River at Spier Falls, N. Y.
[Drainage area, 2,800 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	14,500	4,090	8,580	3.06	3.53
February	5,880	2,090	2,980	1.06	1.10
March	84,200	2,020	21,100	7.54	8.69
April	33,800	*6,060	12,900	4.61	5.14
May	14,100	2,660	5,480	1.96	2.26
June	11,100	*1,250	3,330	1.19	1.33
July	1,620	*571	1,250	0.446	0.51
August	1,750	*196	976	0.349	0.40
September	2,510	*151	939	0.335	0.37
October	5,370	*401	2,080	0.743	0.86
November	16,000	*1,560	5,150	1.84	2.05
December	5,670	*831	2,990	1.07	1.23

* Sunday.

HUDSON RIVER NEAR THURMAN, N. Y.

This station is located at the Delaware and Hudson railroad bridge leading from Thurman to Warrensburg, about 950 feet below the highway bridge to Warrensburg and some 2,000 feet below the entrance of Schroon river into the Hudson. It was established, in coöperation with the New York State Water Supply Commission, September 22, 1907, to obtain general statistical and comparative data regarding the flow of the Hudson river.

There is a dam on Schroon river at Warrensburg, about three miles above the station. On the Hudson there is a dam at Luzerne about twelve miles below. During the winter months the discharge is affected by ice, and the station discontinued.

The datum of the chain gage attached to the bridge has remained the same during the maintenance of the station. Conditions for obtaining accurate discharge data are excellent and a very good rating curve has been developed. All measurements are made from the bridge.

The regimen of flow of the Upper Hudson, especially during the low-water season, has been considerably affected by storage in Indian Lake reservoir.

Mean Daily Gage Height, in Feet, of Hudson River at Thurman, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	3.10	3.80	6.40	......	3.85	4.60	3.05	2.94	2.41	2.42	3.10	2.90
2.....	2.90	10.70	6.40	......	4.80	4.40	3.00	2.88	2.38	2.58	3.30	3.10
3.....	3.30	10.90	6.70	......	3.75	4.20	2.82	2.71	2.34	2.74	3.10	3.00
4.....	3.70	10.30	6.70	6.20	4.70	4.00	2.65	2.58	2.35	2.86	2.92	3.00
5.....	3.80	9.90	6.50	7.30	3.50	3.90	2.87	2.57	2.33	2.84	2.63	3.00
6.....	3.80	9.70	6.80	6.80	4.40	3.80	2.71	2.55	2.33	2.84	2.82	3.00
7.....	3.90	8.80	6.80	6.40	3.45	3.70	2.82	2.54	2.33	2.74	2.80	3.10
8.....	4.00	8.70	6.80	5.80	4.80	3.40	2.72	2.50	2.37	2.66	2.70	3.20
9.....	10.00	8.30	7.10	5.60	3.85	3.45	2.69	2.46	2.38	2.61	2.52	3.40
10.....	10.30	7.70	7.90	4.90	3.40	3.40	2.70	2.58	2.35	2.60	5.60	3.40
11.....	9.90	7.60	7.50	5.40	3.35	3.35	2.85	2.54	2.38	2.54	5.10	3.40
12.....	10.00	7.50	6.60	4.70	3.30	3.05	2.82	2.52	2.50	2.60	4.50	3.10
13.....	9.00	7.30	6.30	5.20	3.20	2.90	2.76	2.51	2.46	2.58	4.10	3.30
14.....	9.00	7.30	9.50	4.70	3.35	2.92	2.88	2.54	2.35	2.54	3.80	3.30
15.....	7.20	7.50	9.50	5.20	3.30	2.82	2.81	2.50	2.54	2.54	3.65	3.20
16.....	7.00	7.40	9.30	4.80	3.30	2.85	2.81	2.47	2.44	2.54	3.35	3.10
17.....	6.8	7.40	8.40	5.10	3.35	2.82	2.80	2.47	2.48	2.51	3.30	3.10
18.....	6.30	7.40	8.40	4.60	3.20	2.82	2.88	2.50	2.52	2.54	3.30	3.10
19.....	6.40	7.00	6.70	4.90	3.25	3.15	2.88	2.44	2.58	2.48	3.10	3.00
20.....	6.00	6.90	6.50	4.20	3.20	3.15	2.62	2.42	2.65	2.88	3.30	2.90
21.....	5.70	7.30	6.60	4.20	3.15	3.10	2.88	2.43	2.49	3.20	3.80	3.00
22.....	5.60	6.80	6.30	4.50	3.20	2.88	2.78	2.40	2.96	3.25	3.95	3.20
23.....	5.30	6.90	5.90	3.90	4.10	3.05	2.82	2.41	3.05	3.35	3.75	2.90
24.....	5.00	6.40	5.50	4.50	3.85	3.00	2.81	2.36	2.71	3.25	3.60	3.20
25.....	4.70	6.40	8.90	4.40	3.90	3.05	2.69	2.40	2.63	3.10	3.50	2.70
26.....	4.60	6.30	9.90	4.50	4.00	2.94	2.68	2.42	2.50	3.55	3.35	3.30
27.....	4.40	6.50	10.90	4.10	3.85	3.00	2.54	2.44	2.30	3.50	3.30	3.80
28.....	4.10	6.70	......	5.60	3.85	2.90	2.85	2.41	2.28	3.45	3.20	4.00
29.....	4.20	......	......	3.95	4.90	2.63	2.78	2.44	2.18	3.40	3.15	4.20
30.....	4.80	......	......	4.40	5.00	2.94	2.73	2.40	2.12	3.25	3.00	4.30
31.....	5.40	......	......	......	4.90	......	2.88	2.34	......	3.15	......	4.50

NOTE.— Relation of gage height to discharge affected by ice from January to March and December 25 to 31. Gage heights for January, February, March and December from the records of the United States Weather Bureau.

Current-meter Discharge Measurements of Hudson River at Thurman, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
April 11	C. S. De Golyer.............	4.90	896	10	0.2 & 0.8	1,600	307	5,970
April 21	C. S. De Golyer.............	4.22	896	10	0.2 & 0.8	1,440	303	4,220
May 27	C. S. De Golyer.............	3.81	896	10	0.2 & 0.8	1,310	301	3,000
Aug. 5 *a*	C. S. De Golyer.............	2.50	877	5	0.2 & 0.8	298	280	642
Aug. 6 *a*	C. S. De Golyer.............	2.52	877	*b*	0.2 & 0.8	471	275	623
Oct. 3	G. H. Canfield..............	2.68	764	10	0.2 & 0.8	910	255	860

a Made by wading 500 feet below gage. *b* 10 ft. interval in left hand channel; 5 ft. interval in right hand channel.

Mean Daily Discharge, Second-feet, of Hudson River at Thurman, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	......	16,000	3,200	5,290	1,460	1,270	551	562	1,550	1,200
2	......	......	......	12,600	5,870	4,710	1,370	1,170	520	746	1,940	1,550
3	......	......	......	10,600	2,960	4,140	1,070	914	480	956	1,550	1,370
4	......	......	......	10,600	5,580	3,590	835	746	490	1,140	1,230	1,370
5	......	......	......	14,900	2,370	3,330	1,150	734	470	1,100	809	1,370
6	......	......	......	12,900	4,710	3,080	914	710	470	1,100	1,070	1,370
7	......	......	......	11,400	2,260	2,840	1,070	698	470	956	1,040	1,550
8	......	......	......	9,140	5,870	2,150	928	650	510	848	900	1,740
9	......	......	......	8,440	3,200	2,260	887	606	520	783	674	2,150
10	......	......	......	6,170	2,150	2,150	900	746	490	770	8,440	2,150
11	......	......	......	7,760	2,040	2,040	1,120	698	520	698	6,780	2,150
12	......	......	......	5,580	1,940	1,460	1,070	674	650	770	5,000	1,550
13	......	......	......	7,100	1,740	1,200	984	662	606	746	3,860	1,940
14	......	......	......	5,580	2,040	1,230	1,170	698	490	698	3,080	1,940
15	......	......	......	7,100	1,940	1,070	1,060	650	698	698	2,720	1,740
16	......	......	......	5,870	1,940	1,120	1,060	617	584	698	2,040	1,550
17	......	......	......	6,780	2,040	1,070	1,040	617	628	662	1,940	1,550
18	......	......	......	5,290	1,740	1,070	1,170	650	674	698	1,940	1,550
19	......	......	......	6,170	1,840	1,640	1,170	584	746	628	1,550	1,370
20	......	......	......	4,140	1,740	1,640	796	562	835	1,170	1,940	1,200
21	......	......	......	4,140	1,640	1,550	1,170	573	639	1,740	3,080	1,370
22	......	......	......	5,000	1,740	1,170	1,010	540	1,300	1,840	3,460	1,740
23	......	......	......	3,330	3,860	1,460	1,070	551	1,460	2,040	2,960	1,200
24	......	......	......	5,000	3,200	1,370	1,060	500	914	1,840	2,600	1,740
25	......	......	......	4,710	3,330	1,460	887	540	809	1,550	2,370	900
26	......	......	......	5,000	3,590	1,270	874	562	650	2,480	2,040	970
27	......	......	......	3,860	3,200	1,370	698	584	440	2,370	1,940	910
28	......	......	......	8,440	3,200	1,200	1,120	551	422	2,260	1,740	770
29	......	......	......	3,460	6,170	809	1,010	584	335	2,150	1,640	830
30	......	......	......	4,710	6,470	1,270	942	540	290	1,840	1,370	930
31	......	......	......	......	6,170	......	1,170	480	......	1,640	......	930
Mean	3,790	1,770	8,570	7,390	3,220	2,000	1,040	666	622	1,230	2,440	1,440

NOTE.— Daily discharge, April 1 to 3, inclusive, and December 26 to 31, inclusive, computed from the combined discharge at North Creek and Riverbank, plus an estimated inflow between these stations and Thurman.

Monthly Discharge of Hudson River at Thurman, N. Y.

[Drainage area, 1,550 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	....	....	3,790	2.45	2.83
February	....	....	1,770	1.14	1.19
March	....	....	8,570	5.53	6.38
April	16,000	3,330	7,390	4.77	5.32
May	6,470	1,640	3,220	2.08	2.40
June	5,290	809	2,000	1.29	1.44
July	1,460	698	1,040	0.671	0.77
August	1,270	480	666	0.43	0.50
September	1,460	290	622	0.401	0.45
October	2,480	562	1,230	0.794	0.92
November	8,440	674	2,440	1.57	1.75
December	....	....	1,440	0.929	1.07

NOTE.— Discharge, January 1 to April 3, inclusive, estimated from the sum of flow at Riverbank and North Creek, plus 10 per cent.

HUDSON RIVER AT NORTH CREEK, N. Y.

This station is located on the steel highway bridge at North Creek. It was established by the U. S. Geological Survey in coöperation with the New York State Water Supply Commission, September 21, 1907, to obtain general statistical and comparative data in regard to the flow of the Hudson.

North creek, a small tributary of the Hudson, enters from the right a short distance below this point.

The datum of the chain gage attached to the bridge has remained the same during the maintenance of the station. During the winter months the discharge is affected by the presence of ice. Conditions for obtaining accurate discharge data are good and a very good rating curve has been developed. All discharge measurements are made from the bridge.

The regimen of flow of the Upper Hudson, especially during the low-water season, has been considerably affected by storage in Indian Lake reservoir.

Information in regard to this station is contained in the annual reports of the United States Geological Survey.

Mean Daily Gage Height, in Feet, of Hudson River at North Creek, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	2.85	3.70	3.00	7.00	3.35	4.30	2.95	3.20	2.55	2.50	3.50	2.80
2.....	2.80	3.50	3.05	6.10	4.30	4.00	2.80	3.05	2.55	2.65	3.50	2.75
3.....	2.95	3.40	3.00	5.60	3.25	3.80	2.55	2.80	2.55	2.90	3.05	2.80
4.....	3.50	3.35	3.00	5.90	4.20	3.65	2.65	2.65	2.55	3.00	2.70	2.85
5.....	3.75	3.20	3.05	7.40	3.10	3.45	2.65	2.75	2.55	2.95	2.60	2.90
6.....	3.80	3.10	3.00	6.70	3.70	3.30	2.80	2.75	2.55	2.90	2.55	2.80
7.....	3.95	3.00	3.15	5.80	3.00	3.20	2.60	2.75	2.50	2.80	2.55	2.80
8.....	4.10	3.00	3.30	5.20	4.40	3.15	2.60	2.70	2.50	2.75	2.46	3.00
9.....	4.20	3.00	3.30	4.90	3.55	3.10	2.60	2.70	2.50	2.70	3.40	3.05
10.....	4.10	2.90	3.40	4.00	3.20	3.10	2.85	2.70	2.50	2.70	6.00	3.30
11.....	3.85	3.15	3.10	4.70	3.00	3.00	2.95	2.70	2.60	2.70	5.60	3.10
12.....	3.80	3.30	2.85	4.30	2.90	2.75	2.95	2.70	2.75	2.70	5.30	2.95
13.....	3.85	3.30	2.70	4.80	2.90	2.80	2.90	2.65	2.65	2.70	4.30	3.00
14.....	3.90	3.30	3.40	4.60	3.20	2.70	2.90	2.65	2.50	2.70	3.90	2.90
15.....	3.75	3.30	4.70	4.40	3.00	2.65	2.90	2.65	2.70	2.65	3.70	2.90
16.....	3.60	3.40	5.30	4.80	3.10	2.65	2.90	2.60	2.65	2.60	3.50	2.90
17.....	3.55	3.30	4.80	4.70	3.10	2.60	2.90	2.65	2.75	2.60	3.30	2.80
18.....	3.95	3.25	4.60	5.00	3.10	2.80	2.85	2.60	2.70	2.60	3.15	2.80
19.....	4.80	3.20	4.50	4.30	3.05	2.90	2.85	2.60	2.75	2.55	3.00	2.65
20.....	4.90	3.20	4.60	3.80	3.05	2.90	2.85	2.60	2.75	2.75	3.30	2.65
21.....	5.20	3.15	5.30	4.00	3.00	2.90	2.80	2.60	2.75	3.25	4.20	2.90
22.....	5.20	3.20	6.20	3.85	3.65	2.85	2.80	2.60	2.95	3.45	4.10	3.15
23.....	5.00	3.25	5.80	3.50	4.00	2.80	2.80	2.60	3.05	3.40	3.80	3.15
24.....	4.70	3.25	5.60	3.90	3.70	2.80	2.80	2.60	2.80	3.25	3.55	2.95
25.....	4.60	3.30	7.40	3.55	3.75	2.75	2.80	2.60	2.75	3.00	3.40	2.65
26.....	4.50	3.20	9.60	4.10	3.70	2.75	2.80	2.55	2.50	3.05	3.45	2.60
27.....	4.30	3.05	10.80	3.75	3.40	2.70	2.75	2.60	2.36	3.45	3.15	2.55
28.....	4.10	3.05	10.40	3.85	3.65	2.70	2.80	2.55	2.19	3.35	3.05	2.38
29.....	3.90	......	8.40	3.55	4.70	2.70	2.90	2.60	2.12	3.15	2.85	2.60
30.....	3.80	......	7.30	4.60	4.90	2.85	2.95	2.55	2.24	3.10	2.95	2.75
31.....	3.50	......	6.90	......	4.70	......	3.15	2.55	......	3.05	......	2.75

NOTE.— Relation of gage height to discharge affected by ice, February 11 to 28, inclusive, and December 29 to 31, inclusive.

Current-meter Discharge Measurements of Hudson River at North Creek, N. Y.

DATE.	Hydrographer.	Mean gage reading.	U.S.G.S. meter No.	Lateral interval.	Submergence depth.	Total area	Total width.	Velocity correction factor.	Corrected discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Mar. 3	Frank Weber.......	3 01	877	5	0 2 & 0 8	574	251	1 53	877
April 14	C. S. De Golyer ...	5 11	896	10	0 2 & 0 8	1,140	249	3 85	4,390
Sept. 19 *a*	C. S. De Golyer.....	2 73	912	10	0 2 & 0 8	371	293	1 44	535
Sept. 22	C. S. De Golyer.....	2 96	912	10	0.2 & 0 8	574	248	1 33	761
Sept. 22 *b*	C. S. De Golyer.....	3 00	912	5	0 2 & 0 8	450	241	1.72	775
Dec. 31 *c*	C. S. De Golyer.....	2 78	912	5	0 2 & 0.8	371	175	1.29	479

a Measurement made by wading 300 feet above gage. *b* Measurement made by wading 40 feet below gage. *c* Measurement made under partial ice conditions.

Mean Daily Discharge, Second-feet, of Hudson River at North Creek, N. Y.

DAY.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	745	1,770	890	9,200	1,180	2,720	732	1,000	418	385	1,390	600
2.....	700	1,480	940	6,690	2,720	2,180	600	832	418	485	1,390	560
3.....	840	1,350	890	5,440	1,060	1,840	418	600	418	685	832	600
4.....	1,480	1,280	890	6,180	2,540	1,600	485	485	418	780	520	642
5.....	1,840	1,100	940	10,400	885	1,320	485	560	418	732	450	685
6.....	1,920	990	890	8,330	1,680	1,120	600	560	418	685	418	600
7.....	2,160	890	1,040	5,930	780	1,000	450	560	385	600	418	600
8.....	2,400	890	1,220	4,520	2,910	942	450	520	385	560	361	780
9.....	2,570	890	1,220	3,880	1,460	885	450	520	385	520	1,250	832
10.....	2,400	790	1,350	2,180	1,000	885	642	520	385	520	6,430	1,120
11.....	2,000	1,000	990	3,480	780	780	732	520	450	520	5,440	885
12.....	1,920	1,000	745	2,720	685	560	732	520	560	520	4,740	732
13.....	2,000	1,000	610	3,680	685	600	685	485	485	520	2,720	780
14.....	2,080	990	1,350	3,290	1,000	520	685	485	385	520	2,010	685
15.....	1,840	970	3,480	2,910	780	485	685	485	520	485	1,680	685
16.....	1,620	950	4,740	3,680	885	485	685	450	485	450	1,390	685
17.....	1,550	940	3,680	3,480	885	450	685	485	560	450	1,120	600
18.....	2,160	900	3,290	4,090	885	600	642	450	520	450	942	600
19.....	3,680	880	3,100	2,720	832	685	642	450	560	418	780	485
20.....	3,880	880	3,290	1,840	832	685	642	450	560	560	1,120	485
21.....	4,520	880	4,740	2,180	780	685	600	450	560	1,060	2,540	685
22.....	4,520	890	6,950	1,920	1,600	642	600	450	732	1,320	2,360	942
23.....	4,090	980	5,930	1,390	2,180	600	600	450	832	1,250	1,840	942
24.....	3,480	1,140	5,440	2,010	1,680	600	600	450	600	1,060	1,460	732
25.....	3,290	970	10,400	1,460	1,760	560	600	450	560	780	1,250	485
26.....	3,100	900	18,200	2,360	1,680	560	600	418	385	832	1,320	450
27.....	2,740	900	23,900	1,760	1,250	520	560	450	303	1,320	942	418
28.....	2,400	890	21,900	1,920	1,000	520	600	418	221	1,180	832	314
29.....	2,080		13,900	1,460	3,480	520	685	450	193	942	642	361
30.....	1,920		10,100	3,290	3,880	642	732	418	243	885	732	457
31.....	1,480		8,910		3,480	......	942	418	......	832	......	479
Mean...	2,370	1,020	5,340	3,810	1,540	874	621	508	444	720	1,640	642

NOTE.— Daily discharge, February 11 to 28, inclusive, estimated by comparison with records at Indian Lake and Spier Falls. Daily discharge, December 29 to 31, inclusive, estimated from backwater effect indicated by measurement made December 31.

Monthly Discharge of Hudson River at North Creek, N. Y.
[Drainage area, 804 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	4,520	700	2,370	2.95	3.40
February	1,770	790	1,020	1.27	1.32
March	23,900	610	5,340	6.64	7.66
April	10,400	1,390	3,810	4.74	5.29
May	3,880	685	1,540	1.92	2.21
June	2,720	450	874	1.09	1.22
July	942	418	621	0.77	0.89
August	1,000	418	508	0.632	0.73
September	832	193	444	0.552	0.62
October	1,320	385	720	0.896	1.03
November	6,430	361	1,640	2.04	2.28
December	1,120	314	642	0.799	0.92

CEDAR RIVER.

CEDAR RIVER NEAR INDIAN LAKE, N. Y.

This gaging station is located at the steel highway bridge about two miles west of Indian Lake village on the road leading to Blue Mountain lake and about 12 miles along the stream to its confluence with the Hudson river. The drainage area at this point is 85 square miles.

The gage is of the chain-and-weight type.

The channel consists of coarse gravel and small boulders and is fairly permanent. Current-meter discharge measurements are made from the bridge during high stages and by wading during low stages.

The drainage area of this stream contains many lakes and swamps, which might be used to good advantage for storage purposes. The flow of Cedar river is somewhat controlled by a lumberman's dam used principally during the logging season. It has been found necessary to suspend observations at this station during the frozen period, owing to the effect of ice conditions. The maximum discharge at this station during the flood of March, 1913, was 2,490 second-feet, or 29.3 second-feet per square mile of drainage area.

This station was established and is maintained by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Mean Daily Gage Height, in Feet, of Cedar River near Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.												
1	......	......	......	......	......	......	......	2.52	2.45	2.60	3.58	4.00
2	......	......	......	......	......	......	......	2.50	2.45	2.80	3.78	4.00
3	......	......	......	......	......	......	......	2.50	2.58	2.75	3.95	3.45
4	......	......	......	......	......	......	......	2.50	2.50	3.30	3.20	3.40
5	......	......	......	......	......	......	......	2.45	2.50	3.40	3.22	3.45
6	......	......	......	......	......	......	......	2.45	2.50	3.90	3.25	3.68
7	......	......	......	......	......	......	......	2.45	2.85	4.00	3.50	3.75
8	......	......	......	......	......	......	......	2.45	2.85	4.00	3.65	3.75
9	......	......	......	......	......	......	......	2.45	3.25	3.90	......	3.55
10	......	......	......	......	......	......	......	2.45	3.45	2.85	......	4.35
11	......	......	......	......	......	......	......	2.50	3.48	2.85	......	4.65
12	......	......	......	......	......	......	......	2.50	3.32	2.90	......	6.30
13	......	......	......	......	......	......	......	2.50	3.25	2.90	......	5.85
14	......	......	......	......	......	......	......	2.48	2.92	2.82	......	5.90
15	......	......	......	......	......	......	2.52	2.45	2.88	2.80	......	5.02
16	......	......	......	......	......	......	2.50	2.45	3.10	2.80	3.05	4.92
17	......	......	......	......	......	......	2.50	2.50	4.05	2.82	3.68	4.65
18	......	......	......	......	......	......	2.71	2.50	3.12	2.80	3.90	4.52
19	......	......	......	......	......	......	2.55	2.55	3.00	2.85	4.22	3.70
20	......	......	......	......	......	......	2.50	2.55	2.80	3.00	4.00	3.50
21	......	......	......	......	......	......	2.58	2.50	2.78	3.00	3.50	3.40
22	......	......	......	......	......	......	2.55	2.50	2.78	3.00	3.45	3.30
23	......	......	......	......	......	......	2.50	2.50	2.80	3.70	3.55	5.90
24	......	......	......	......	......	......	2.52	2.50	2.80	4.00	3.30	5.70
25	......	......	......	......	......	......	2.50	2.48	2.50	4.00	3.30	5.05
26	......	......	......	......	......	......	2.45	2.55	2.50	3.25	3.30	4.50
27	......	......	......	......	......	......	2.45	2.50	2.50	3.25	3.28	4.60
28	......	......	......	......	......	......	2.50	2.68	2.45	3.60	3.32	6.20
29	......	......	......	......	......	......	2.55	2.82	2.55	3.30	4.42	......
30	......	......	......	......	......	......	2.52	2.70	2.60	3.22	4.32	......
31	......	......	......	......	......	......	2.52	2.58	......	3.30	......	......

Mean Daily Gage Height, in Feet, of Cedar River near Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	......	......	......	6.40	9.85	4.85	2.60	2.50	2.85	3.35	3.10	3.30
2	......	......	......	7.10	3.85	4.15	2.60	2.50	2.90	3.70	4.05	3.30
3	......	......	......	6.80	4.85	3.40	2.60	2.90	3.20	3.65	3.60	5.75
4	......	......	......	6.40	10.05	3.95	2.60	2.95	3.05	3.60	3.40	5.30
5	......	......	......	6.25	5.35	4.00	2.55	2.80	2.95	3.40	3.35	5.20
6	......	......	......	6.90	5.45	3.80	2.80	2.80	3.10	3.20	3.30	5.20
7	......	......	......	9.70	5.35	3.75	2.70	2.75	3.05	3.15	3.40	4.70
8	......	......	......	10.15	3.65	2.90	2.65	2.55	2.90	3.05	6.80	4.65
9	......	......	......	8.95	3.45	3.95	2.60	2.55	2.85	3.10	6.70	4.25
10	......	......	......	8.00	3.55	3.00	2.60	2.60	2.85	3.25	6.00	6.15
11	......	......	4.35	6.60	3.45	4.30	2.65	2.80	2.90	3.00	5.80	5.60
12	......	......	4.45	6.25	3.65	4.00	2.65	2.85	2.80	3.25	5.00	4.80
13	......	......	4.35	5.50	3.60	3.90	2.65	2.80	2.80	3.30	3.95	4.80
14	......	......	4.45	6.15	9.65	3.75	3.90	2.80	2.80	3.10	3.60	4.75
15	......	......	4.40	6.10	3.30	3.00	3.50	2.65	2.75	3.05	3.50	4.70
16	......	......	5.80	9.65	3.50	2.95	2.90	2.60	3.30	2.80	3.65	4.70
17	......	......	6.55	9.55	4.35	2.85	2.70	2.55	3.00	2.80	3.45	4.50
18	......	......	6.15	7.40	5.45	2.90	2.60	2.60	2.90	2.85	3.40	4.70
19	......	......	5.90	7.05	5.65	2.85	3.00	2.65	3.10	2.95	4.75	4.90
20	......	......	6.00	6.10	5.95	2.85	2.50	2.60	3.35	3.00	4.55	5.40
21	......	......	6.00	5.75	6.05	2.95	3.30	2.60	3.40	2.80	4.70	5.35
22	......	......	5.75	6.30	6.45	2.85	3.20	2.95	4.35	2.90	4.30	5.25
23	......	......	5.60	10.15	5.95	2.80	2.60	2.80	4.50	3.00	3.60	4.95
24	......	......	5.75	4.85	9.00	2.80	2.70	2.80	3.60	3.90	3.30	4.90
25	......	......	5.50	4.25	5.00	2.82	2.60	2.75	3.70	6.30	3.50	4.85
26	......	......	5.30	4.40	4.65	2.78	2.60	2.70	3.95	5.60	3.45	4.45
27	......	......	5.60	4.45	4.25	2.75	2.60	2.80	4.20	5.35	3.40	4.40
28	......	......	5.25	9.15	4.25	2.70	2.50	2.85	3.70	4.65	3.10	4.40
29	......	......	5.50	4.10	4.00	2.65	2.50	2.75	3.30	4.40	2.80	4.40
30	......	......	6.00	3.85	5.65	2.60	2.60	2.70	3.30	4.20	3.30	4.35
31	......	......	6.10	......	5.15	......	2.60	2.80	......	4.15	......	4.30

Mean Daily Gage Height, in Feet, of Cedar River near Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	......	......	5.10	3.25	4.10	2.50	2.60	2.60	2.60	6.90	3.50
2	......	......	......	4.00	3.10	4.00	2.50	2.60	2.55	2.70	5.30	3.30
3	......	......	......	3.90	3.05	3.70	2.50	2.65	2.60	3.40	3.80	3.60
4	......	......	......	5.00	3.00	3.70	2.40	2.75	2.70	3.20	3.35	3.50
5	......	......	......	9.70	3.00	3.20	2.40	2.70	2.50	2.80	3.40	3.40
6	......	......	......	4.70	2.95	3.25	2.40	2.70	2.45	2.75	3.30	3.40
7	......	......	......	4.00	2.90	3.30	2.60	2.65	2.40	2.70	3.30	3.40
8	......	......	......	9.80	2.90	3.10	2.65	2.60	2.50	2.70	3.40	3.60
9	......	......	......	4.70	3.00	3.65	2.70	2.60	2.50	2.75	5.70	5.60
10	......	......	......	3.30	3.10	3.60	3.10	2.60	2.50	2.80	8.70	5.60
11	......	......	......	3.65	2.90	3.45	2.90	2.60	2.50	2.60	8.50	6.10
12	......	......	......	3.80	3.00	3.30	2.70	2.60	2.50	2.80	8.00	6.50
13	......	......	......	3.85	4.60	2.95	2.75	2.60	2.55	2.85	7.00	6.40
14	......	......	......	9.60	3.20	2.90	2.70	2.60	2.60	2.80	4.00	6.30
15	......	......	......	3.90	4.00	2.80	2.70	2.60	2.55	2.80	3.90	5.50
16	......	......	......	8.20	3.30	2.75	2.60	2.50	2.50	2.70	3.70	5.50
17	......	......	......	3.35	3.35	2.80	2.65	2.45	2.55	2.70	3.50	5.40
18	......	......	......	3.30	3.15	2.75	2.60	2.40	2.60	2.75	3.45	5.40
19	......	......	......	3.40	3.20	2.80	2.70	2.60	2.60	2.70	3.50	5.00
20	......	......	......	3.45	3.20	3.00	2.60	2.60	2.55	3.60	5.30	5.10
21	......	......	......	3.20	3.00	2.90	2.70	2.60	2.60	5.90	4.80	......
22	......	......	......	3.20	9.60	2.85	2.60	2.60	3.95	4.50	4.30	......
23	......	......	......	3.15	4.50	2.75	2.60	2.70	3.80	4.00	4.40	......
24	......	......	......	3.10	4.40	2.70	2.70	2.65	3.70	3.95	4.50	......
25	......	......	......	3.50	6.00	2.55	2.75	2.60	3.60	4.00	5.50	......
26	......	......	11.30	3.35	4.00	2.50	2.70	2.60	3.60	4.20	3.60	......
27	......	......	10.80	3.20	3.15	2.60	2.65	2.60	2.70	4.20	3.40	......
28	......	......	9.80	3.25	4.00	2.55	2.70	2.60	2.70	4.40	3.35	......
29	......	......	4.40	3.70	5.60	2.40	2.90	2.70	2.65	4.00	3.40	......
30	......	......	4.05	3.35	5.30	2.50	2.70	2.60	2.60	4.30	3.30	......
31	......	......	4.20	......	4.90	......	2.65	2.60	......	4.40	......	......

NOTE.— Gage heights affected by ice from December 20, 1912, to March 27, 1913, inclusive, and from December 9 to 31, 1913, inclusive. One observation per day.

Current-meter Discharge Measurements of Cedar River at Indian Lake, N. Y.

DATE.	Hydrographer.	GAGE READING.			Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.					
1913.					*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Feb. 22 *a*	Barnes & Weber	5 93	5.93	5.93	5	0.2 & 0.8	141	66	120
April 16	C. S. De Golyer	8.03	7.78	7.95	5	0.2 & 0 8	388	69	1,640
April 16	C. S. De Golyer	6.75	6.00	6.41	5	0 2 & 0.8	279	69	902
April 16	C. S. De Golyer	4 49	4.28	4.39	5	0.2 & 0.8	160	62	334
April 16	C. S. De Golyer	4.05	3 95	4.00	5	0.2 & 0.8	138	60	241
July 7 *b*	C. S. De Golyer	2.61	2.61	2.61	2.5	0.2 & 0 8	52.2	47.5	35.5
Sept. 10 *c*	C. S. De Golyer	2.50	2.50	2.50	2 5	0.2 & 0 8	28 2	50	20.4
Sept. 17 *c*	C. S. De Golyer	2.50	2 50	2.50	2.5	0.6	27.9	48	18.9

a Made under complete ice cover, 40 feet below gage. *b* Made by wading 10 feet above gage. *c* Made by wading 200 feet above gage.

Mean Daily Discharge, Second-feet, of Cedar River near Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.												
1	......	......	......	......	......	......	......	30	26	35	155	243
2	......	......	......	......	......	......	......	29	26	50	196	243
3	......	......	......	......	......	......	......	29	34	46	232	132
4	......	......	......	......	......	......	......	29	29	107	93	123
5	......	......	......	......	......	......	......	26	29	123	96	132
6	......	......	......	......	......	......	......	26	29	221	100	175
7	......	......	......	......	......	......	......	26	54	243	140	190
8	......	......	......	......	......	......	......	26	54	243	169	190
9	......	......	......	......	......	......	......	26	100	221	180	150
10	......	......	......	......	......	......	......	26	132	54	180	326
11	......	......	......	......	......	......	......	29	137	54	180	404
12	......	......	......	......	......	......	......	29	110	59	180	957
13	......	......	......	......	......	......	......	29	100	59	150	786
14	......	......	......	......	......	......	......	28	61	52	120	804
15	......	......	......	......	......	......	30	26	57	50	100	508
16	......	......	......	......	......	......	29	26	80	50	74	479
17	......	......	......	......	......	......	29	29	254	52	175	404
18	......	......	......	......	......	......	43	29	83	50	221	369
19	......	......	......	......	......	......	32	32	69	54	294	179
20	......	......	......	......	......	......	29	32	50	69	257	140
21	......	......	......	......	......	......	34	29	48	69	140	123
22	......	......	......	......	......	......	32	29	48	69	132	107
23	......	......	......	......	......	......	29	29	50	179	150	804
24	......	......	......	......	......	......	30	29	50	243	107	731
25	......	......	......	......	......	......	29	28	29	243	107	517
26	......	......	......	......	......	......	26	32	29	100	107	364
27	......	......	......	......	......	......	26	29	29	100	104	300
28	......	......	......	......	......	......	29	41	26	159	110	250
29	......	......	......	......	......	......	32	52	32	107	343	200
30	......	......	......	......	......	......	30	42	35	96	318	180
31	......	......	......	......	......	......	30	34	......	107	......	150
Mean	......	......	......	......	......	......	30.5	30.2	63	109	164	344

NOTE. — Daily discharge, November 9 to 15, estimated by interpolation and comparison.

Mean Daily Discharge, Second-feet, of Cedar River near Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	......	......	......	......	2,520	459	35	29	54	115	80	107
2	......	......	......	......	210	478	35	29	59	179	254	107
3	......	......	......	......	459	123	35	59	93	169	159	749
4	......	......	......	......	2,620	232	35	64	74	159	123	595
5	......	......	......	......	612	243	32	50	64	123	115	563
6	......	......	......	......	645	200	50	50	80	93	107	563
7	......	......	......	......	612	190	42	46	74	86	123	417
8	......	......	......	......	169	59	38	32	59	74	1,160	404
9	......	......	......	......	132	232	35	32	54	80	1,120	301
10	......	......	......	......	150	69	35	35	54	100	842	......
11	......	......	......	......	132	313	38	50	59	69	767	......
12	......	......	......	......	169	243	38	54	50	100	502	......
13	......	......	......	......	159	221	38	50	50	107	232	......
14	......	......	......	......	2,420	190	221	50	50	80	159	431
15	......	......	......	......	107	69	140	38	46	74	140	417
16	......	......	......	2,420	140	64	59	35	107	50	169	417
17	......	......	......	2,370	326	54	42	32	69	50	137	364
18	......	......	......	1,410	645	59	35	35	59	54	123	417
19	......	......	......	1,260	714	54	69	38	80	64	431	473
20	......	......	......	880	823	54	29	35	115	69	377	......
21	......	......	......	749	861	64	107	35	123	50	417	......
22	......	......	......	957	1,020	54	93	64	326	59	313	......
23	......	......	......	2,670	823	50	35	50	364	69	159	......
24	......	......	......	459	2,120	50	42	50	159	221	107	......
25	......	......	......	301	502	52	35	46	179	957	140	......
26	......	......	......	338	404	48	35	42	232	696	132	......
27	......	......	......	351	301	46	35	50	289	612	123	......
28	......	......	......	2,184	301	42	29	54	179	404	80	......
29	......	......	......	266	243	38	29	46	107	338	50	......
30	......	......	......	210	714	35	35	42	107	289	107	......
31	......	......	......	......	548	......	35	50	......	278	......	......
Mean	......	......	......	......	697	136	51.3	44.3	114	189	291	......

Mean Daily Discharge, Second-feet, of Cedar River near Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept	Oct.	Nov.	Dec.
1913.												
1	......	......	......	532	100	266	29	35	28	28	1,200	140
2	......	......	......	243	80	243	29	35	24	37	595	107
3	......	......	......	221	74	179	29	38	28	123	200	159
4	......	......	......	502	69	179	23	46	37	93	115	140
5	......	......	......	2,450	69	93	23	42	20	47	123	123
6	......	......	......	417	64	100	23	42	17	42	107	123
7	......	......	......	243	59	107	35	38	14	37	107	123
8	......	......	......	2,490	59	80	38	35	20	37	123	159
9	......	......	......	417	69	169	42	35	20	42	731	......
10	......	......	......	107	80	159	80	35	20	47	1,980	......
11	......	......	......	169	59	132	59	35	20	28	1,890	......
12	......	......	......	200	69	107	42	35	20	47	1,670	......
13	......	......	......	210	390	64	46	35	24	52	1,240	......
14	......	......	......	2,400	93	59	42	35	28	47	243	......
15	......	......	......	221	243	50	42	35	24	47	221	......
16	......	......	......	1,760	107	46	35	29	20	37	179	......
17	......	......	......	115	115	50	38	26	24	37	140	......
18	......	......	......	107	86	46	35	23	28	42	132	......
19	......	......	......	123	93	50	42	28	28	37	140	......
20	......	......	......	132	93	69	35	28	24	159	595	......
21	......	......	......	93	69	59	42	28	28	804	445	......
22	......	......	......	93	2,400	54	35	28	232	364	313	......
23	......	......	......	86	364	46	35	37	200	243	338	......
24	......	......	......	80	338	42	42	32	179	232	364	......
25	......	......	......	140	842	32	46	28	159	243	662	......
26	......	......	......	115	243	29	42	28	159	289	159	......
27	......	......	......	93	86	35	38	28	37	289	123	......
28	......	......	2,490	100	243	32	42	28	37	338	115	......
29	......	......	338	179	696	23	59	37	32	243	123	......
30	......	......	254	115	595	29	42	28	28	313	107	......
31	......	......	289	......	473	......	38	28	......	338	......	......
Mean	......	......	......	472	272	87.6	39.6	32.9	52	154	483	......

Monthly Discharge of Cedar River near Indian Lake, N. Y.
[Drainage area, 85 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1911.					
July	43	26	30.5	0.359	0.23
August	52	26	30.2	0.355	0.41
September	254	26	63	0.741	0.83
October	243	35	109	1.28	1.47
November	343	74	164	1.93	2.15
December	957	107	344	4.05	4.67

Monthly Discharge of Cedar River near Indian Lake, N. Y.
[Drainage area, 85 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
May	2,620	107	697	8.20	9.45
June	478	35	136	1.60	1.78
July	221	29	51.3	0.604	0.70
August	64	29	44.3	0.521	0.60
September	364	46	114	1.34	1.50
October	957	50	189	2.22	2.56
November	1,160	50	291	3.42	3.82
December	....	....	....	....	....

Monthly Discharge of Cedar River near Indian Lake, N. Y.
[Drainage area, 85 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
April	2,490	80	472	5.55	6.19
May	2,400	59	272	3.20	3.69
June	266	23	87.6	1.03	1.15
July	80	23	39.6	0.466	0.54
August	46	23	32.9	0.387	0.45
September	232	14	52	0.612	0.68
October	804	28	154	1.81	2.09
November	1,980	107	483	5.68	6.34
December	....	....	....	....	....

INDIAN RIVER.

INDIAN RIVER NEAR INDIAN LAKE, N. Y.

This gaging station is located about three-quarters of a mile below the State dam at the outlet of Indian lake, 1 mile above the mouth of Big brook and 8 miles above the point where the stream enters the Hudson river. Big brook is the only important tributary of the Indian river below this station. The drainage area at the gaging station is 132 square miles.

The gage is of the vertical staff type and the flow of the stream is controlled by the dam at the foot of Indian lake.

Current-meter discharge measurements are made by means of a cable about 75 feet below the gage and also by wading. During the winter the gage heights are not seriously affected by ice.

Mean Daily Gage Height, in Feet, of Indian River near Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	......	......	......	......	......	......	2.30	2.55	2.85	0.15	0.15	0.10
2.....	......	......	......	......	......	......	2.30	2.55	2.85	0.10	0.15	0.15
3.....	......	......	......	......	......	......	2.30	3.25	2.85	0.10	0.15	0.20
4.....	......	......	......	......	......	......	2.30	3.25	2.80	0.10	0.15	0.20
5.....	......	......	......	......	......	......	2.30	3.25	2.80	0.10	0.15	0.20
6.....	......	......	......	......	......	......	2.30	3.25	2.80	0.10	0.15	0.20
7.....	......	......	......	......	......	......	2.30	3.25	2.75	0.10	0.15	0.25
8.....	......	......	......	......	......	......	3.65	3.20	2.75	0.10	0.40	0.25
9.....	......	......	......	......	......	......	3.65	3.20	2.75	2.20	0.30	0.25
10.....	......	......	......	......	......	......	2.75	3.20	2.75	2.20	0.20	0.25
11.....	......	......	......	......	......	......	2.75	3.20	2.70	2.20	0.20	0.25
12.....	......	......	......	......	......	......	2.75	3.15	2.70	2.20	0.15	0.25
13.....	......	......	......	......	......	......	2.70	3.15	2.70	2.15	0.15	0.25
14.....	......	......	......	......	......	......	2.70	3.15	2.65	2.15	0.20	0.25
15.....	......	......	......	......	......	......	2.70	3.15	2.65	2.15	0.20	0.25
16.....	......	......	......	......	......	......	2.70	3.10	2.65	2.15	0.15	0.25
17.....	......	......	......	......	......	......	2.70	3.10	2.60	0.10	0.15	0.25
18.....	......	......	......	......	......	......	2.70	3.10	2.60	0.10	0.15	0.25
19.....	......	......	......	......	......	......	2.65	3.05	0.10	0.10	0.15	0.30
20.....	......	......	......	......	......	......	2.65	3.05	0.10	0.10	0.15	0.30
21.....	......	......	......	......	......	......	2.65	3.05	0.10	0.10	0.15	0.30
22.....	......	......	......	......	......	......	2.65	3.05	0.10	0.10	0.15	0.30
23.....	......	......	......	......	......	......	2.65	3.05	0.15	0.15	0.15	0.30
24.....	......	......	......	......	......	......	2.65	3.00	0.15	0.15	0.15	0.30
25.....	......	......	......	......	......	......	2.60	3.00	0.15	0.15	0.15	0.30
26.....	......	......	......	......	......	......	2.60	3.00	0.15	0.15	0.15	0.30
27.....	......	......	......	......	......	......	2.60	2.95	0.15	0.15	0.15	0.25
28.....	......	......	......	......	......	......	2.60	2.95	0.15	0.15	0.15	0.25
29.....	......	......	......	......	......	......	2.60	2.95	0.15	0.15	0.10	0.40
30.....	......	......	......	......	......	......	2.60	2.90	0.15	0.15	0.10	0.40
31.....	......	......	......	......	......	......	2.60	2.90	......	0.15	......	0.40

Mean Daily Gage Height, in Feet, of Indian River near Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	0.40	1.75	2.60	5.20	2.45	2.60	2.80	3.30	2.45	2.30	0.10	0.10
2.....	0.40	1.80	2.60	4.90	2.40	2.60	1.80	2.60	2.45	2.30	0.10	0.10
3.....	0.45	1.85	2.60	4.70	2.30	2.50	2.30	2.60	2.40	2.30	0.10	0.10
4.....	0.45	1.85	2.60	4.20	2.20	2.40	2.40	2.60	2.40	2.30	0.10	0.10
5.....	0.45	1.80	2.60	4.40	2.10	2.30	2.80	2.60	2.40	2.25	0.10	0.10
6.....	0.45	1.80	2.90	4.40	2.00	2.20	2.40	2.60	2.40	2.25	0.10	0.15
7.....	0.50	1.75	3.40	4.20	1.95	2.10	2.35	2.60	2.40	2.25	0.10	0.15
8.....	0.50	1.70	3.20	4.00	1.90	2.00	2.30	2.60	2.40	2.25	0.10	0.20
9.....	0.50	1.65	3.20	3.80	1.80	1.90	2.60	2.60	2.40	2.20	0.10	0.20
10.....	0.50	1.65	2.70	3.60	1.75	1.85	3.00	2.60	2.60	2.20	0.10	0.20
11.....	0.50	2.70	1.63	3.50	1.60	1.80	2.90	2.60	2.90	2.15	0.10	0.15
12.....	0.60	3.00	0.35	3.40	1.50	1.75	2.90	2.60	2.70	2.15	0.10	0.15
13.....	0.60	2.90	0.35	3.40	1.45	1.70	2.90	2.60	2.30	2.15	0.15	0.15
14.....	0.60	2.80	0.35	3.40	1.40	1.70	2.80	2.60	2.90	2.10	0.15	0.10
15.....	0.65	2.80	0.35	3.40	1.40	1.70	2.80	2.60	2.45	2.10	0.15	0.10
16.....	0.65	2.70	0.45	3.20	1.40	1.65	2.80	2.60	2.90	2.05	0.15	0.10
17.....	0.65	2.70	0.45	3.00	1.45	2.10	2.80	2.60	2.70	2.05	0.15	0.10
18.....	0.67	2.70	0.45	2.90	1.50	2.60	2.80	2.60	2.90	2.00	0.15	0.10
19.....	0.70	2.70	0.50	2.80	1.50	2.60	2.80	2.60	2.80	2.00	0.15	0.10
20.....	0.90	2.70	0.50	2.80	1.50	2.60	2.80	2.60	2.80	0.05	0.15	0.10
21.....	1.55	2.60	0.50	2.80	1.50	2.50	2.80	2.60	2.80	0.05	0.15	2.60
22.....	2.00	2.70	1.40	2.70	1.50	2.50	2.80	2.50	2.25	0.05	0.15	2.60
23.....	2.50	2.70	1.90	2.60	1.50	2.45	2.80	2.50	0.05	0.05	0.15	2.60
24.....	3.00	2.60	2.20	2.60	1.80	2.40	2.80	2.50	0.05	0.05	0.15	0.10
25.....	3.40	2.60	3.20	2.50	1.80	2.35	2.80	2.50	0.05	0.05	0.10	0.10
26.....	3.30	2.60	5.80	2.50	1.80	2.30	2.80	2.50	0.05	0.05	0.10	0.10
27.....	3.20	2.60	7.10	2.50	1.80	2.30	2.80	2.50	0.05	0.10	0.10	0.10
28.....	3.10	1.95	7.80	2.50	2.10	2.30	2.80	2.50	0.05	0.10	0.10	0.10
29.....	3.00	......	7.10	2.50	2.60	2.70	2.90	2.45	1.27	0.10	0.10	0.10
30.....	2.05	......	6.40	2.45	2.60	3.00	3.60	2.45	2.30	0.10	0.10	0.05
31.....	1.70	......	6.20	......	2.70	......	3.60	2.45	......	0.10	......	0.05

NOTE.— No gage heights affected by ice. One observation per day, at about 4:00 P. M.

Current-meter Discharge Measurements of Indian River near Indian Lake, N. Y.

DATE.	Hydrographer.	GAGE READING.			Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.					
1913.					*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Feb. 28	Weber & Barnes	0.52	0.51	0.52	5	0.6	65.0	47	16.0
Mar. 1	Weber & Barnes	2.58	2.58	2.58	5	0.2 & 0.8	185	70	467
Mar. 1	Weber & Barnes	2.18	2.18	2.18	5	0.2 & 0.8	162	69	327
April 18	C. S. De Golyer	2.99	2.98	2.98	5	0.2 & 0.8	214	72	631
April 18	C. S. De Golyer	2.98	2.97	2.98	5	0.2 & 0.8	213	72	617
July 1	C. S. De Golyer	3.01	3.01	3.01	2.5	0.2 & 0.8	209	72	606
July 1 *a*	C. S. De Golyer	2.42	2.42	2.42	2.5	0.2 & 0.8	175	71.5	387
July 1	C. S. De Golyer	2.85	2.90	2.88	2.5	0.2 & 0.8	200	72	538
July 2 *a*	C. S. De Golyer	0.86	0.85	0.86	2.5	0.2 & 0.8	80.4	53.5	47.7
July 2 *a*	C. S. De Golyer	1.83	1.83	1.83	2.5	0.2 & 0.8	138	67.5	217
July 3	C. S. De Golyer	2.57	2.58	2.58	2.5	0.2 & 0.8	182	72	447
July 3 *a*	C. S. De Golyer	1.75	1.75	1.75	2.5	0.2 & 0.8	131	66	201
July 3	C. S. De Golyer	2.31	2.32	2.32	2.5	0.2 & 0.8	163	71	350
July 3	C. S. De Golyer	2.71	2.71	2.71	2.5	0.2 & 0.8	188	72	485
July 4	C. S. De Golyer	2.39	2.37	2.38	2.5	0.2 & 0.8	170	72	376
July 5	C. S. De Golyer	4.00	4.00	4.00	2.5	0.2 & 0.8	274	77	1,030
July 5	C. S. De Golyer	3.82	3.82	3.82	3.5	0.2 & 0.8	260	77	948
July 5	C. S. De Golyer	3.20	3.23	3.22	2.5	0.2 & 0.8	222	73	685
July 7	C. S. De Golyer	2.37	2.37	2.37	2.5	0.2 & 0.8	170	72	375
Sept. 11	C. S. De Golyer	2.90	2.90	2.90	2.5	0.2 & 0.8	201	72	549
Sept. 12 *a*	C. S. De Golyer	1.84	1.84	1.84	2.5	0.2 & 0.8	134	68	223

a Made by wading under cable.

Mean Daily Discharge, Second-feet, of Indian River near Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	.....	.....	.....	.....	.....	.....	353	436	545.0	1.5	1.5	1.0
2	.....	.....	.....	.....	.....	.....	353	436	545.0	1.0	1.5	1.5
3	.....	.....	.....	.....	.....	.....	353	704	545.0	1.0	1.5	2.0
4	.....	.....	.....	.....	.....	.....	353	704	526.0	1.0	1.5	2.0
5	.....	.....	.....	.....	.....	.....	353	704	526.0	1.0	1.5	2.0
6	.....	.....	.....	.....	.....	.....	353	704	526.0	1.0	1.5	2.0
7	.....	.....	.....	.....	.....	.....	353	704	508.0	1.0	1.5	3.5
8	.....	.....	.....	.....	.....	.....	875	684	508.0	1.0	9.0	3.5
9	.....	.....	.....	.....	.....	.....	875	684	508.0	322.0	5.0	3.5
10	.....	.....	.....	.....	.....	.....	508	684	508.0	322.0	2.0	3.5
11	.....	.....	.....	.....	.....	.....	508	684	489.0	322.0	2.0	3.5
12	.....	.....	.....	.....	.....	.....	508	663	489.0	322.0	1.5	3.5
13	.....	.....	.....	.....	.....	.....	489	663	489.0	307.0	1.5	3.5
14	.....	.....	.....	.....	.....	.....	489	663	471.0	307.0	2.0	3.5
15	.....	.....	.....	.....	.....	.....	489	663	471.0	307.0	2.0	3.5
16	.....	.....	.....	.....	.....	.....	489	643	471.0	307.0	1.5	3.5
17	.....	.....	.....	.....	.....	.....	489	643	453.0	1.0	1.5	3.5
18	.....	.....	.....	.....	.....	.....	489	643	453.0	1.0	1.5	3.5
19	.....	.....	.....	.....	.....	.....	471	623	1.0	1.0	1.5	5.0
20	.....	.....	.....	.....	.....	.....	471	623	1.0	1.0	1.5	5.0
21	.....	.....	.....	.....	.....	.....	471	623	1.0	1.0	1.5	5.0
22	.....	.....	.....	.....	.....	.....	471	623	1.0	1.0	1.5	5.0
23	.....	.....	.....	.....	.....	.....	471	623	1.5	1.5	1.5	5.0
24	.....	.....	.....	.....	.....	.....	471	603	1.5	1.5	1.5	5.0
25	.....	.....	.....	.....	.....	.....	453	603	1.5	1.5	1.5	5.0
26	.....	.....	.....	.....	.....	.....	453	603	1.5	1.5	1.5	5.0
27	.....	.....	.....	.....	.....	.....	453	584	1.5	1.5	1.5	3.5
28	.....	.....	.....	.....	.....	.....	453	584	1.5	1.5	1.5	3.5
29	.....	.....	.....	.....	.....	.....	453	584	1.5	1.5	1.0	9.0
30	.....	.....	.....	.....	.....	.....	453	564	1.5	1.5	1.0	9.0
31	.....	.....	.....	.....	.....	.....	453	564	.....	1.5	.....	9.0
Mean	.....	.....	.....	.....	.....	.....	473	629	302.0	82.1	1.9	4.08

Mean Daily Discharge, Second-feet, of Indian River near Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	9	200	453	1,650	402	453	526	725	402	353	1.0	1.0
2.....	9	212	453	1,480	385	453	212	453	402	353	1.0	1.0
3.....	12	224	453	1,380	353	418	353	453	385	353	1.0	1.0
4.....	12	224	453	1,120	322	385	385	453	385	353	1.0	1.0
5.....	12	212	453	1,220	292	353	526	453	385	338	1.0	1.0
6.....	12	212	564	1,220	264	322	385	453	385	338	1.0	1.5
7.....	15	200	767	1,120	250	292	369	453	385	338	1.0	1.5
8.....	15	189	684	1,030	237	264	353	453	385	338	1.0	2.0
9.....	15	178	684	941	212	237	453	453	385	322	1.0	2.0
10.....	15	178	489	853	200	224	603	453	453	322	1.0	2.0
11.....	15	489	174	810	168	212	564	453	564	307	1.0	1.5
12.....	22	603	7	767	148	200	564	453	489	307	1.0	1.5
13.....	22	564	7	767	138	189	564	453	353	307	1.0	1.5
14.....	22	526	7	767	129	189	526	453	564	292	1.5	1.0
15.....	26	526	7	767	129	189	526	453	402	292	1.5	1.0
16.....	26	489	12	684	129	178	526	453	564	278	1.5	1.0
17.....	26	489	12	603	138	292	526	453	489	278	1.5	1.0
18.....	28	489	12	564	148	453	526	453	564	264	1.5	1.0
19.....	31	489	15	526	148	453	526	453	526	264	1.5	1.0
20.....	53	489	15	526	148	453	526	453	526	0.5	1.5	*a*114
21.....	158	453	15	526	148	418	526	453	526	0.5	1.5	453
22.....	264	489	129	489	148	418	526	418	338	0.5	1.5	453
23.....	418	489	237	453	148	402	526	418	0.5	0.5	1.5	*a*340
24.....	603	453	322	453	212	385	526	418	0.5	0.5	1.5	1.0
25.....	767	453	684	418	212	369	526	418	0.5	0.5	1.0	1.0
26.....	725	453	2,010	418	212	353	526	418	0.5	0.5	1.0	1.0
27.....	684	453	2,910	418	212	353	526	418	0.5	1.0	1.0	1.0
28.....	643	250	3,460	418	292	353	526	418	0.5	1.0	1.0	1.0
29.....	603	......	2,910	418	453	489	564	402	106	1.0	1.0	1.0
30.....	278	......	2,420	418	453	603	853	402	353	1.0	1.0	0.5
31.....	189	......	2,280	402	489	......	853	402	......	1.0	......	0.5
Mean...	185	381	745	774	230	345	517	449	344	194	1.2	44.9

a Gates changed after gage was read. Discharge is weighted mean of discharge before and after change of gates.

NOTE.— Discharge for individual days, when gates were changed at Indian Lake, may be considerably in error.

Monthly Discharge of Indian River near Indian Lake, N. Y.

[Drainage area, 132 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
July	875	353	473	3.58	4.13
August	704	436	629	4.77	5.50
September	545	1	302	2.29	2.56
October	322	1	82.1	0.622	0.72
November	9	1	1.9	0.0144	0.02
December	9	1	4.1	0.0311	0.04

NOTE.— These figures indicate the actual flow of the river as controlled at Indian lake.

Monthly Discharge of Indian River near Indian Lake, N. Y.
[Drainage area, 132 square miles.]

MONTH.	Discharge in Second-feet.				Run-off.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	767	9	185	1.40	1.61
February	603	178	381	2.89	3.01
March	3,460	7	745	5.64	6.50
April	1,650	402	774	5.86	6.54
May	489	129	236	1.79	2.06
June	603	178	345	2.61	2.91
July	853	212	517	3.92	4.52
August	725	402	449	3.40	3.92
September	564	0.5	344	2.61	2.91

Gate Openings, in Feet, of Indian Lake Reservoir at Indian Lake, N. Y.

DATE.	Sluice-gate A.	Sluice-gate B.
1913.	*Feet.*	*Feet.*
Jan. 24-29, inclusive	....	2.5
Feb. 10-11, "	....	2.5
Feb. 12—Mar. 9, "	....	5.0
Mar. 6-10, "	2.5	....
Mar. 25-31, "	....	4.0
June 17-28, "	....	2.5
June 29-30, "	....	5.0
July 1-8, "	....	2.5
July 9-Sept. 21 "	....	5.0
July 29-Aug. 1, "	5.0	....
Sept. 10-21, "	2.5	....
Sept. 29-Oct. 19, "	....	5.0
Dec. 21-23, "	....	5.0

Mean Daily Gage Height, in Feet, of Indian Lake Reservoir at Indian Lake, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	28.30	34.40	31.50	36.65	34.45	34.85	31.45	24.10	17.40	12.45	12.50	18.20
2.....	28.40	34.40	31.30	36.50	34.40	34.80	31.30	23.80	17.20	12.25	12.55	18.25
3.....	28.60	34.45	31.15	36.15	34.35	34.70	31.15	23.55	17.00	12.10	12.65	18.30
4.....	28.95	34.45	31.00	36.10	34.30	34.60	30.95	23.35	16.80	12.00	12.70	18.40
5.....	29.15	34.40	30.85	36.20	34.20	34.50	30.70	23.15	16.60	11.90	12.80	18.50
6.....	29.40	34.40	30.65	36.40	34.20	34.40	30.60	22.95	16.40	11.70	12.90	18.60
7.....	29.70	34.35	30.30	36.20	34.10	34.30	30.35	22.75	16.20	11.55	12.95	18.70
8.....	30.15	34.35	30.10	36.00	33.95	34.25	30.15	22.50	16.00	11.35	13.00	19.00
9.....	30.40	34.35	29.85	35.70	34.00	34.20	30.00	22.30	15.80	11.20	13.55	19.20
10.....	30.75	34.35	29.60	35.50	33.95	34.15	29.75	22.10	15.50	11.00	14.60	19.30
11.....	31.00	34.20	29.50	35.45	33.85	34.10	29.55	21.85	15.20	10.80	15.15	19.40
12.....	31.15	34.00	29.60	35.45	33.80	34.05	29.30	21.60	14.90	10.60	15.60	19.50
13.....	31.40	33.80	29.65	35.35	33.80	33.95	29.10	21.35	14.75	10.45	15.70	19.70
14.....	31.65	33.60	29.90	35.30	33.80	33.90	28.85	21.20	14.40	10.30	15.80	19.80
15.....	31.85	33.40	30.40	35.25	33.75	33.90	28.55	21.00	14.15	10.10	15.90	19.90
16.....	32.05	33.25	31.15	35.15	33.75	33.85	28.35	20.70	13.90	9.95	16.05	20.00
17.....	32.15	33.10	31.65	35.05	33.75	33.75	28.10	20.50	13.70	9.75	16.20	20.05
18.....	32.50	32.95	32.00	34.95	33.75	33.55	27.90	20.30	13.25	9.55	16.30	20.10
19.....	31.10	32.80	32.30	34.90	33.75	33.40	27.65	20.05	12.90	9.45	16.40	20.15
20.....	33.50	32.60	32.70	34.85	33.75	33.30	27.40	19.85	12.70	9.60	16.70	20.20
21.....	34.20	32.40	33.30	34.80	33.70	33.20	27.10	19.65	12.60	10.00	17.00	20.05
22.....	34.65	32.30	34.20	34.75	33.70	33.05	26.80	19.45	12.50	10.25	17.20	19.85
23.....	35.00	32.20	34.65	34.65	33.80	32.90	26.60	19.10	12.65	10.60	17.40	19.65
24.....	35.10	32.05	34.90	34.50	34.00	32.70	26.40	18.85	12.70	10.65	17.60	19.75
25.....	34.90	31.90	35.90	34.60	34.00	32.50	26.20	18.60	12.75	10.90	17.70	19.80
26.....	34.85	31.75	37.40	34.55	34.00	32.35	25.95	18.40	12.80	11.20	17.75	19.95
27.....	34.70	31.65	38.65	34.55	34.00	32.25	25.75	18.20	12.80	11.50	17.80	20.05
28.....	34.55	31.60	38.80	34.50	34.35	32.10	25.55	18.00	12.80	11.75	17.90	20.10
29.....	34.40	......	38.00	34.45	34.75	31.90	25.35	17.80	12.75	12.15	18.00	20.15
30.....	34.35	......	37.10	34.45	34.95	31.65	24.95	......	12.55	12.30	18.10	20.20
31.....	34.40	......	36.80	......	34.90	......	24.55	17.60	......	12.40	......	20.25

HOOSIC RIVER.

DESCRIPTION.

Hoosic river has its sources on the west slope of the Hoosac mountains in Vermont and Massachusetts. Two head branches, one flowing southward, the other northward along the west slope of this range, unite at North Adams, Mass., and the stream then flows northwestward, entering the Hudson three miles north of Mechanicville. Above Buskirk the drainage basin is rugged and precipitous, the distribution of tributaries affording rapid concentration of the run-off from the steep rock slopes. The ridges are sparsely wooded. The soil in the valleys is generally firm and tenacious. The general elevation of the valley at the junction of the head waters is 1,000 feet. Numerous dams, affording power for textile, agricultural implement, and other industries, are scattered throughout the length of the stream from North Adams to Schaghticoke. The drainage basin contains no important lakes and but little storage in reservoirs.

Hoosic River at Schaghticoke, N. Y.

The gaging records for this station have been furnished this Department by the Schenectady Power Co., which maintains the station in connection with its hydro-electric plant at Schaghticoke.

Mean Daily Discharge, Second-feet, of Hoosic River at Schaghticoke, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	2,326	1,261	1,168	3,217	763	717	162	162	11	127	509	601
2	1,967	613	671	2,118	483	926	231	196	......	81	243	463
3	1,250	949	1,630	1,904	266	787	173	57	104	81	416	474
4	2,268	717	949	1,689	428	578	150	127	57	92	358	625
5	2,303	636	370	1,706	567	428	92	......	115	46	393	671
6	2,824	30	393	1,493	463	335	69	81	92	127	358	600
7	3,171	543	....	1,250	509	625	.....	138	23	138	208	761
8	3,391	636	694	1,215	451	254	115	172	34	69	418	1,660
9	2,974	474	1,178	983	405	405	196	115	196	92	1,319	1,018
10	2,465	393	1,569	902	428	347	57	46	104	92	2,025	960
11	2,303	567	1,354	1,906	289	358	254	115	92	......	1,007	821
12	2,361	520	1,307	1,713	231	381	138	81	23	......	798	763
13	2,048	497	1,111	1,978	381	277	347	......	150	208	706	717
14	1,527	428	1,504	1,458	300	277	231	69	34	185	636	486
15	1,238	463	1,932	1,406	300	162	185	46	23	115	694	810
16	1,192	324	1,435	1,620	279	219	150	162	46	97	497	698
17	2,210	613	1,400	1,111	358	289	92	......	127	104	613	821
18	3,888	405	1,921	1,500	196	115	150	23	23	138	463	682
19	2,812	335	1,493	1,180	335	196	185	57	23	......	590	706
20	1,921	500	1,500	1,018	358	196	34	11	57	208	1,041	532
21	2,118	717	1,736	752	300	358	138	92	23	428	821	428
22	1,979	1,412	3,148	659	509	219	138	34	231	254	798	462
23	1,562	1,284	2,222	590	1,157	34	173	69	717	254	509	600
24	1,587	1,030	1,851	883	2,025	220	196	......	254	174	659	509
25	1,111	682	1,921	821	949	220	127	60	117	277	591	393
26	706	486	8,298	868	717	243	208	69	115	1,921	544	787
27	1,122	1,284	16,527	648	1,169	162	......	46	115	2,350	335	290
28	1,134	1,550	9,710	810	1,458	312	185	57	.....	1,075	567	347
29	1,041	......	4,444	1,007	1,134	347	266	69	150	706	474	368
30	844	......	4,201	879	1,134	104	196	150	115	662	441	416
31	995	......	5,220	......	659	......	151	34	......	567	......	416
Mean	1,956	691	2,762	1,309	613	336	165	87	113	381	634	641

Monthly Discharge of Hoosic River at Schaghticoke, N. Y.

[Drainage area, 635 square miles.]

MONTH.	Discharge in Second-feet.				Run-off.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	3,888	706	1,956	3.07	3.54
February	1,550	30	691	1.09	1.14
March	16,527	370	2,762	4.35	5.02
April	3,217	590	1,309	2.06	2.30
May	2,025	196	613	0.965	1.11
June	926	34	336	0.529	0.59
July	347	34	165	0.26	0.30
August	196	11	87	0.137	0.158
September	717	11	113	0.178	0.199
October	2,350	46	381	0.600	0.692
November	2,025	208	634	0.999	1.11
December	1,660	290	641	1.01	1.16

HOOSIC RIVER AT JOHNSONVILLE, N. Y.

The Schenectady Power Co. maintains gaging records in connection with its hydro-electric plant at Johnsonville and has furnished this Department with the records for this station.

Mean Daily Discharge, Second-feet, of Hoosic River at Johnsonville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	2,094	1,135	1,052	2,996	687	646	146	146	10	115	459	541
2	1,771	552	604	1,907	435	834	208	177	......	73	219	417
3	1,125	855	927	1,750	240	709	156	52	94	73	375	427
4	2,042	646	855	......	386	521	135	115	52	83	323	563
5	2,073	573	333	1,536	511	380	83	......	104	42	354	604
6	2,542	27	354	1,344	417	302	63	73	83	115	323	540
7	2,854	489	......	1,125	459	521	......	125	21	125	188	685
8	3,052	573	625	1,094	406	229	104	155	31	63	377	1,494
9	2,677	427	1,060	785	405	365	177	104	177	81	1,188	917
10	2,219	354	1,413	812	386	313	52	42	94	83	1,825	864
11	2,073	511	1,219	1,716	261	323	229	104	83	......	907	739
12	2,121	468	1,177	1,542	208	343	125	73	21	......	719	687
13	1,844	448	1,000	1,781	343	250	313	......	135	188	......	646
14	1,375	383	1,354	1,313	270	250	208	63	31	167	573	438
15	1,115	417	1,734	1,266	270	146	167	42	21	104	625	729
16	1,073	292	1,292	1,458	252	198	135	146	42	......	448	629
17	1,989	552	1,260	1,000	323	261	83	......	115	......	552	739
18	3,500	365	1,729	1,350	177	104	135	21	21	125	417	614
19	2,531	302	1,344	1,062	302	177	167	52	21	......	531	636
20	1,729	450	1,350	917	323	177	31	10	52	188	931	479
21	1,907	646	1,563	677	270	323	125	83	21	380	739	386
22	1,782	1,271	2,834	594	458	198	125	31	208	229	718	416
23	1,406	1,156	2,000	531	1,042	31	156	63	646	229	459	540
24	1,429	927	1,666	795	1,825	198	177	......	229	157	594	459
25	1,000	614	1,729	739	855	198	115	63	106	250	531	354
26	636	458	8,469	782	646	219	188	63	104	1,729	470	709
27	1,010	1,156	14,875	584	1,053	146	......	42	104	2,115	302	261
28	1,021	1,395	8,839	729	1,313	281	167	52	......	968	491	313
29	937	......	4,000	907	1,021	313	240	63	135	......	427	323
30	760	......	3,781	792	1,021	94	177	135	104	596	396	375
31	896	......	4,698	......	591	......	136	31	......	511	......	375
Mean	1,761	623	2,504	1,168	551	302	149	79	102	352	568	577

Monthly Discharge of Hoosic River at Johnsonville, N. Y.
[Drainage area, 609 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	3,500	636	1,761	2.89	3.33
February	1,395	27	623	1.02	1.06
March	14,875	333	2,504	4.11	4.74
April	2,996	531	1,168	1.92	2.14
May	1,825	177	551	0.91	1.05
June	834	31	302	0.496	0.553
July	313	31	149	0.245	0.282
August	177	10	79	0.130	0.150
September	646	10	102	0.167	0.186
October	2,115	42	352	0.578	0.666
November	1,825	188	568	0.933	1.04
December	1,494	261	577	0.947	1.09

HOOSIC RIVER NEAR EAGLE BRIDGE, N. Y.

August 13, 1910, a chain-gage was established on the left bank of Hoosic river about one mile upstream from Eagle Bridge and one-half mile below the mouth of Walloomsac river. This gage was installed to replace the gaging station at Buskirk. The gage is of the chain-and-weight type and is supported by a cantilever arm 14 feet in length securely fastened to two trees a short distance back from the edge of the bank, which is about 12 feet above low water at this point. Length of chain and weight, 18.62 feet. The gage is referred to two bench-marks: No. 1, spike in blaze on upstream side of walnut tree, 8 inches in diameter and about 10 feet downstream from the gage, elevation 17.565; No. 2, spike in small elm stump, 2 feet high and 2 feet upstream from gage, elevation 17.688. Both elevations are above zero of gage.

The dam of Walter A. Wood & Company, located at Hoosick Falls, about two miles upstream from the gage, has considerable influence on the flow of the stream during low water. Walloomsac river, also slightly controlled by power developments, enters Hoosic river about 1½ miles below the dam at Hoosick Falls.

The channel is fairly straight for 900 to 1,000 feet upstream from the gage and for about the same distance downstream. The left bank, in general, is high and wooded, while the right bank is low and subject to overflows in high water. About 1,000 feet downstream from the gage, the banks are high on both sides and seldom flooded, except during periods of extreme high water, usually caused by temporary ice jams at the railroad bridge about three-fourths mile downstream.

Discharge measurements are made from a cable station one-half mile below the location of the gage.

Mean Daily Gage Height, in Feet, of Hoosic River near Eagle Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	9.70	9.90	9.60	11.60	8.40	8.60	7.40	7.18	6.68	6.88	8.10	8.30
2.....	9.40	8.60	9.00	10.50	8.15	8.60	7.20	6.95	6.53	6.90	7.65	8.05
3.....	9.80	8.70	8.60	10.10	8.10	8.30	7.08	6.68	6.58	7.00	7.85	8.00
4.....	10.90	8.70	8.60	9.80	8.10	8.25	6.92	7.13	7.01	7.00	7.90	7.80
5.....	9.60	8.35	8.40	10.00	8.00	8.05	7.00	6.91	7.03	6.82	7.60	8.10
6.....	9.60	8.25	8.30	9.70	8.10	7.85	......	7.08	7.01	7.18	7.60	8.00
7.....	10.80	8.15	7.85	9.60	8.00	7.80	......	6.95	6.78	6.98	7.50	8.00
8.....	12.20	8.15	8.00	9.40	7.80	7.80	......	6.95	7.13	6.85	7.40	9.90
9.....	10.80	7.95	8.00	9.10	7.75	7.80	......	6.71	7.43	6.92	7.30	9.10
10.....	10.10	8.00	9.40	9.00	7.70	7.80	7.48	6.68	7.28	6.92	11.10	8.80
11.....	9.80	7.90	9.60	9.80	7.55	7.85	7.35	6.91	6.98	6.88	9.30	8.80
12.....	10.40	8.10	9.10	11.30	7.90	7.70	7.08	6.85	6.78	6.52	8.70	8.60
13.....	9.90	7.80	9.10	10.50	7.70	7.60	7.35	6.83	6.85	7.38	8.40	8.50
14.....	9.40	7.80	11.20	10.50	7.60	7.17	7.43	6.91	6.38	7.70	8.30	8.70
15.....	9.20	7.90	12.30	10.00	7.50	7.25	7.35	7.21	6.65	6.98	8.40	8.60
16.....	9.20	7.90	11.60	9.70	7.75	7.50	7.01	6.78	6.95	7.05	8.15	8.45
17.....	9.80	8.00	10.20	9.50	7.70	7.50	6.98	6.75	6.83	6.90	8.25	8.40
18.....	11.40	7.80	9.50	9.30	7.65	7.35	6.91	6.73	6.91	6.85	8.00	8.40
19.....	11.30	7.85	9.40	9.20	7.80	7.40	7.05	6.91	6.93	6.55	8.00	8.30
20.....	10.20	7.80	9.80	9.00	7.70	7.70	6.83	6.83	6.83	7.15	8.70	8.15
21.....	11.00	7.95	10.50	8.90	7.70	7.70	7.03	6.88	6.58	8.10	8.80	8.00
22.....	10.20	8.50	11.00	8.70	7.80	7.38	7.08	6.78	6.93	7.80	8.50	8.30
23.....	9.80	9.80	9.80	8.70	8.80	7.60	7.03	6.75	7.95	7.80	8.20	8.00
24.....	10.20	8.55	10.00	8.50	9.80	7.32	7.01	6.75	7.75	7.55	8.40	8.10
25.....	9.70	8.15	10.20	8.40	9.10	7.28	7.05	6.83	7.42	7.80	8.20	8.00
26.....	9.40	7.90	12.60	8.40	8.60	7.28	6.98	6.88	7.28	8.90	8.20	8.20
27.....	9.50	8.00	14.80	8.25	8.35	7.30	6.71	7.05	6.85	10.50	7.80	7.80
28.....	9.20	10.80	13.70	8.40	8.50	7.17	6.98	6.85	6.68	9.10	8.40	7.70
29.....	8.90	......	12.00	8.80	10.40	6.95	7.50	6.78	6.85	8.60	8.10	8.20
30.....	8.90	......	11.00	8.60	9.40	7.05	7.35	6.81	7.12	8.30	8.05	8.05
31.....	8.80	......	10.80	......	9.00	......	7.43	6.91	......	8.05	......	8.00

NOTE.— Gage heights not affected by ice during winter of 1912-13.

Current-meter Discharge Measurements of Hoosic River near Eagle Bridge, N. Y.

DATE.	Hydrographer.	Mean gage reading.	U. S. G. S. meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*		*Sec. ft.*
Mar. 15	C. S. De Golyer.....	12.46	896	10	0.2 & 0.8	1,140	192	4.45	5,070
Sept. 24	R. S. Barnes........	7.52	897	5	0.2 & 0.8	223	100	1.44	321

Mean Daily Discharge, Second-feet, of Hoosic River near Eagle Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	1,820	2,000	1,730	3,840	810	950	270	189	72	112	620	745
2	1,560	950	1,240	2,570	650	950	195	128	50	116	378	590
3	1,910	1,020	950	2,180	620	745	160	72	57	140	478	560
4	2,990	1,020	950	2,000	620	712	121	174	142	140	505	450
5	1,730	778	810	2,090	560	590	140	118	148	98	355	620
6	1,730	712	745	1,820	620	478	165	160	142	189	355	560
7	2,880	650	478	1,730	560	450	180	128	90	135	310	560
8	4,720	650	505	1,560	450	450	195	128	174	105	270	2,000
9	2,880	532	560	1,320	425	450	230	77	282	121	230	1,320
10	2,180	560	1,560	1,240	400	450	302	72	223	121	3,220	1,090
11	1,910	505	1,730	1,910	332	478	250	118	135	112	1,480	1,090
12	2,470	620	1,320	3,460	505	400	160	105	90	48	1,020	950
13	2,000	450	1,320	2,570	400	355	250	101	105	262	810	880
14	1,560	450	3,340	2,570	355	186	282	118	30	400	745	1,020
15	1,400	505	4,880	2,090	310	212	250	198	68	135	810	950
16	1,400	515	3,840	1,820	425	310	142	90	128	152	650	845
17	1,910	560	2,280	1,640	400	310	135	84	101	116	712	810
18	3,580	450	1,640	1,475	378	250	118	81	118	105	560	810
19	3,460	478	1,560	1,395	450	270	152	118	123	52	560	745
20	2,280	450	1,910	1,240	400	400	101	101	101	180	1,020	650
21	3,100	532	2,570	1,160	400	400	148	112	57	620	1,090	560
22	2,280	880	3,100	1,020	450	262	160	90	123	450	880	745
23	1,910	1,910	1,910	1,020	1,090	355	148	84	532	450	680	560
24	2,280	915	2,090	880	1,910	238	142	84	425	332	810	620
25	1,820	650	2,280	810	1,320	223	152	101	278	450	680	560
26	1,560	505	5,370	810	950	223	135	112	223	1,160	680	680
27	1,640	560	10,000	710	810	230	77	152	105	2,570	450	450
28	1,400	2,880	7,200	810	880	186	135	105	72	1,320	810	400
29	1,160	......	4,410	1,090	2,470	128	310	90	72	950	620	680
30	1,160	......	3,100	950	1,560	162	250	96	171	745	590	590
31	1,090	......	2,880	......	1,240	......	282	118	......	590	......	560
Mean	2,120	833	2,530	1,659	734	393	185	113	148	402	746	763

NOTE.— Daily discharges at low stages may be slightly in error, because of artificial control of the stream. Discharge for December 29 to 31 may be slightly large on account of ice.

Monthly Discharge of Hoosic River near Eagle Bridge, N. Y.

[Drainage area, 512 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	4,720	1,090	2,120	4.14	4.77
February	2,880	450	833	1.63	1.70
March	10,000	478	2,530	4.94	5.70
April	3,840	710	1,659	3.24	3.62
May	2,470	310	734	1.43	1.65
June	950	128	393	0.767	0.86
July	282	77	185	0.361	0.42
August	198	72	113	0.221	0.25
September	532	30	148	0.289	0.32
October	2,570	48	402	0.785	0.90
November	1,480	230	746	1.46	1.63
December	2,000	400	763	1.49	1.72

HOOSIC RIVER AT HOOSICK FALLS, N. Y.

Mean Daily Gage Height, in Feet, of Hoosic River at Hoosick Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913												
1.....	1.25	1.30	1.30	1.80	0.40	0.35	-1.00	-0.45	-1.10	-1.70	0.50	0.65
2.....	1.10	1.00	0.75	1.45	0.35	0.25	-1.20	-0.70	-0.60	-0.40	0.90	0.65
3.....	1.10	0.55	0.40	0.95	0.20	0.10	-1.60	-1.85	-1.10	-0.70	0.55	0.70
4.....	1.50	0.40	0.30	0.80	0.40	0.25	-1.50	-1.10	-0.50	-1.00	0.50	0.70
5.....	1.25	0.30	0.20	0.85	0.15	0.55	-0.70	-0.70	-1.45	0.00	0.45	0.70
6.....	1.15	0.20	0.10	0.85	0.20	0.50	0.00	-1.25	-0.40	-0.70	0.45	0.80
7.....	1.35	0.10	0.10	0.65	0.10	0.50	0.10	-1.40	-0.00	-1.70	0.35	0.80
8.....	1.95	0.05	0.15	0.75	0.05	0.50	-0.70	-1.25	-0.40	-2.00	0.35	1.50
9.....	1.70	0.25	0.50	0.85	-0.05	0.40	-0.80	-0.75	-1.15	-2.00	0.70	1.30
10.....	1.40	0.15	1.10	0.65	0.10	0.20	-0.30	-0.95	-1.05	-2.00	2.25	1.10
11.....	1.05	0.00	1.00	1.20	0.00	0.15	-0.40	-0.45	-1.25	-1.70	1.35	0.85
12.....	1.50	-0.15	0.50	1.85	0.10	0.15	-0.50	-0.50	-2.00	0.30	0.90	0.80
13.....	1.10	-0.25	0.40	1.70	0.10	0.05	0.40	0.20	-2.00	0.60	0.70	0.80
14.....	0.95	-0.15	1.25	1.50	-0.40	0.05	-0.30	0.25	0.30	-1.40	0.50	1.05
15.....	0.65	-0.15	1.80	1.25	-0.30	0.30	-0.30	0.20	-2.20	-1.70	0.50	0.90
16.....	0.60	-0.10	1.70	1.00	-0.20	0.10	-0.40	-0.90	-1.05	-1.40	0.60	0.85
17.....	1.00	-0.15	1.00	0.90	-0.20	0.10	-0.45	-0.30	-2.00	-0.70	0.55	0.85
18.....	1.55	-0.25	0.65	0.80	0.30	0.05	-0.90	-0.40	-1.70	-0.70	0.65	0.85
19.....	1.80	-0.25	0.45	0.70	-0.15	0.15	0.00	-0.40	-1.40	0.60	0.65	0.65
20.....	1.10	-0.35	0.65	0.65	-0.25	0.20	0.10	-0.40	-1.40	-0.70	0.75	0.60
21.....	1.40	-0.15	1.05	0.65	-0.25	0.55	-0.85	-0.30	-0.40	-0.20	0.75	0.70
22.....	1.10	0.40	1.35	0.65	0.15	0.45	-0.95	-0.30	0.30	-0.20	0.75	0.70
23.....	0.90	1.05	0.85	0.55	0.70	0.40	-0.95	-0.30	0.25	-0.35	0.80	0.70
24.....	0.90	0.45	0.70	0.65	1.00	0.05	-1.05	-0.30	-0.15	-0.45	0.75	0.70
25.....	0.80	0.05	0.75	0.55	0.75	0.05	-1.10	-0.30	-0.25	-0.25	0.65	0.80
26.....	0.85	-0.15	2.00	0.50	0.40	0.05	-0.20	-0.30	-0.55	0.80	0.65	0.65
27.....	0.65	-0.15	3.45	0.45	0.25	0.00	0.10	-0.30	-1.00	2.70	0.70	0.60
28.....	0.50	1.55	3.15	0.55	0.25	0.00	-0.50	-0.40	0.60	1.30	0.75	0.60
29.....	0.40	......	1.95	0.45	1.15	-0.10	-0.30	-0.50	-0.70	1.15	0.75	0.55
30.....	0.30	......	1.75	0.45	0.70	-0.10	0.05	-0.50	-1.70	1.10	0.65	0.55
31.....	0.30	......	1.55	......	0.50	......	0.05	-0.60	......	1.00	......	0.50

SACANDAGA RIVER.

DESCRIPTION.

Sacandaga river is one of the larger tributaries of the upper Hudson. It drains extensive portions of the southeast slope of the Adirondack region as well as a portion of the plateau lying north of Mohawk river and south of the Adirondack mountains. The head waters of the stream rise in the slopes surrounding Lake Pleasant, Sacandaga and Piseco lakes. Above Northville the drainage basin is rugged and almost completely forest-covered. From Northville to Conklingville the stream winds through a sandy valley flanked by steep slopes. The width of this valley averages about one mile from Northampton to Conklingville. Above Northampton is an extensive flat lying at elevation of about 740 feet. This flat is drained by Mayville, Vly and Hann's creeks, and contains extensive swamp areas. From Northville to Conkingville, a distance along the general course of the stream of about 22 miles, there is very little fall. The elevation at

Conklingville is about 720 feet. Sacadanga river enters Hudson river at Luzerne at elevation about 540 feet. The distance from Conklingville to Luzerne is about seven miles along the general course of the stream.

SACANDAGA RIVER AT CABLE STATION NEAR HADLEY, N. Y.

This station is located on the Sacandaga river about 1 mile above the mouth of the stream and 6 miles by river below the proposed dam at Conklingville. It was established November 12, 1910, to obtain data applicable to the proposed storage on this stream.

The river channel at this point was cleared of boulders to make the cross-section comparatively smooth and permanent, and a 5/8-inch galvanized wire rope, from which discharge measurements are made, was stretched across the stream.

About 30 feet downstream from the cable and on the left bank, a concrete well was built, 3 feet square, inside dimensions. The bottom of the well is about 2 feet below low water and 12 feet below ground surface; it is connected with the river by a 4-inch cast iron water pipe, 48 feet in length, having its intake end pointing downstream and protected by a fine wire screen. Inside of the well and securely bolted to the side is a bed plank, to which is fastened a staff gage with its zero at elevation 573.36, referred to a U. S. Geological Survey aluminum tablet set in the foundation wall of the Union Bag and Paper Company's mill at Hadley. On the top of the well is a concrete shelter 6 feet high and 3 feet square, inside dimensions, for protecting the recording gage.

Mean Daily Gage Height, in feet, of Sacandaga River near Hadley, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	4.70	4.80	4.00	8.20	5.00	6.20	3.00	2.78	2.54	2.69	4.30	4.05
2.....	4.70	4.60	4.00	7.80	4.90	5.80	2.91	2.72	2.49	2.73	4.10	4.00
3.....	4.80	4.40	4.10	7.40	4.80	5.40	2.87	2.65	2.46	2.97	3.90	4.00
4.....	5.50	4.35	3.95	7.00	4.70	5.10	2.83	2.63	2.38	3.40	3.85	4.10
5.....	4.70	4.30	3.90	6.80	4.35	4.80	2.79	2.63	2.37	3.30	3.80	4.15
6.....	5.80	4.10	3.85	6.70	4.60	4.50	2.76	2.61	2.37	3.15	3.80	4.15
7.....	5.90	4.00	3.75	6.50	4.45	4.30	2.73	2.60	2.37	3.05	3.75	4.20
8.....	6.00	3.90	3.70	6.30	4.15	4.05	2.70	2.59	2.37	2.95	3.70	5.10
9.....	6.10	3.95	3.70	6.00	4.20	4.00	2.68	2.56	2.36	2.88	4.50	5.40
10.....	6.10	3.90	4.10	5.70	3.95	3.95	2.66	2.53	2.36	2.83	6.50	5.20
11.....	6.00	3.95	4.45	5.50	3.85	3.85	2.61	2.48	2.36	2.80	7.00	5.00
12.....	6.00	4.20	4.60	5.70	3.70	3.75	2.78	2.46	2.34	2.76	7.00	4.50
13.....	5.80	4.40	4.80	5.80	4.15	3.65	2.83	2.43	2.31	2.75	6.60	4.45
14.....	5.70	4.40	5.70	5.80	4.20	3.60	2.82	2.42	2.29	2.76	6.20	4.50
15.....	5.60	4.30	6.20	5.60	4.15	3.45	2.81	2.41	2.28	2.76	5.80	4.40
16.....	5.40	4.20	6.80	5.50	4.05	3.30	2.78	2.40	2.25	2.72	5.40	4.25
17.....	5.40	4.20	7.10	5.30	3.95	3.40	2.73	2.40	2.26	2.72	5.00	4.20
18.....	5.70	4.15	7.10	5.10	3.90	3.35	2.68	2.39	2.27	2.71	4.70	4.15
19.....	6.20	4.10	6.80	5.10	3.70	3.25	2.66	2.39	2.28	2.72	4.50	3.95
20.....	6.50	4.00	6.80	5.30	3.90	3.20	2.63	2.44	2.31	2.92	4.60	3.65
21.....	6.80	3.90	6.80	5.30	3.90	3.35	2.62	2.44	2.38	4.15	5.10	3.75
22.....	6.90	4.15	7.30	5.20	3.90	3.35	2.61	2.41	2.56	4.35	5.20	3.80
23.....	6.90	4.50	7.70	5.00	4.40	3.30	2.60	2.37	3.45	4.50	5.00	3.65
24.....	6.70	4.80	7.50	4.90	5.40	3.30	2.60	2.34	3.55	4.15	4.80	3.50
25.....	6.50	4.80	7.60	4.80	5.60	3.35	2.59	2.33	3.20	4.25	4.70	3.65
26.....	6.30	4.50	9.50	4.80	5.60	3.30	2.60	2.33	3.05	5.00	4.50	3.60
27.....	6.00	4.20	11.40	4.60	5.30	3.25	2.61	2.42	2.96	5.50	4.35	3.70
28.....	5.80	4.10	12.20	4.40	5.50	3.30	2.62	2.44	2.85	5.40	4.20	4.25
29.....	5.40	......	11.20	4.90	6.30	3.35	2.61	2.50	2.78	5.10	4.10	4.70
30.....	5.10	......	10.00	5.10	6.70	3.20	2.76	2.53	2.71	4.80	4.10	4.70
31.....	4.90	......	8.80	......	6.60	......	2.80	2.54	......	4.60	......	4.60

NOTE.— Relation of gage height to discharge affected by ice, February 11 to March 8 and December 25 to 31. On days having little fluctuation in stage the mean gage height was obtained by an inspection of the hydrograph traced by the gage; on days when the fluctuation was considerable the mean gage height was taken from the average of six periods of 4 hours each.

Current-meter Discharge Measurements of Sacandaga River near Hadley, N. Y.

DATE.	Hydrographer.	Mean gage reading.	U. S. G. S. meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Feb. 10 [a]	F. Weber....................	3.94	877	6.3	0.2 & 0.8	525	201	1,080
Feb. 19 [b]	F. Weber....................	4.12	877	5	0.2 & 0.8	683	120	677
Mar. 4 [a]	F. Weber....................	3.97	877	6.1	0.2 & 0.8	460	212	965
Mar. 30	J. G. Mathers...............	9.83	797	10	0.2 & 0.8	1,970	255	18,600
April 12	C. S. De Golyer.............	5.67	896	10	0.2 & 0.8	932	235	3,930
Sept. 23	C. S. De Golyer.............	3.65	912	5	0.2 & 0.8	453	226	810
Dec. 30 [a]	C. S. De Golyer.............	4.67	912	5	0.2 & 0.8	664	220	894

[a] Control under partial ice cover. [b] Control under partial ice cover; made from bridge 2,000 feet below gage.

Mean Daily Discharge, Second-feet, of Sacandaga River near Hadley, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	2,050	2,210	1,000	11,300	2,540	5,080	366	254	153	214	1,500	1,220
2	2,050	1,900	980	9,840	2,370	4,130	317	227	135	232	1,270	1,160
3	2,210	1,630	970	8,500	2,210	3,270	297	197	124	350	1,060	1,160
4	3,470	1,570	960	7,280	2,050	2,710	278	189	98	622	1,010	1,270
5	2,050	1,500	900	6,690	1,570	2,210	258	189	95	552	956	1,330
6	4,130	1,270	870	6,400	1,900	1,760	245	180	95	455	956	1,330
7	4,360	1,160	860	5,850	1,700	1,500	232	176	95	395	910	1,380
8	4,600	1,060	850	5,330	1,330	1,220	218	172	95	339	864	2,710
9	4,840	1,110	864	4,600	1,380	1,160	210	161	92	302	1,760	3,270
10	4,840	1,080	1,270	3,900	1,110	1,110	201	149	92	278	5,850	2,890
11	4,600	960	1,700	3,470	1,010	1,010	180	131	92	263	7,280	2,540
12	4,600	880	1,900	3,900	864	910	254	124	86	245	7,280	1,760
13	4,130	800	2,210	4,130	1,330	821	278	114	77	240	6,120	1,700
14	3,900	740	3,900	4,130	1,380	778	273	111	72	245	5,080	1,760
15	3,680	700	5,080	3,680	1,330	660	258	107	69	245	4,130	1,630
16	3,270	660	6,690	3,470	1,220	552	254	104	61	227	3,270	1,440
17	3,270	650	7,580	3,080	1,110	622	232	104	64	227	2,540	1,380
18	3,900	660	7,580	2,710	1,060	587	210	101	67	222	2,050	1,330
19	5,080	680	6,690	2,710	864	519	201	101	69	227	1,760	1,110
20	5,850	750	6,690	3,080	1,060	486	189	118	77	323	1,900	821
21	6,690	860	6,690	3,080	1,060	587	184	118	98	1,330	2,710	910
22	6,980	1,100	8,180	2,890	1,060	587	180	107	161	1,570	2,890	956
23	6,980	1,350	9,500	2,540	1,630	552	176	95	660	1,760	2,540	821
24	6,400	1,500	8,820	2,370	3,270	552	176	86	738	1,330	2,210	698
25	5,850	1,350	9,160	2,210	3,680	587	172	83	486	1,440	2,050	660
26	5,330	1,240	17,000	2,210	3,680	552	176	83	395	2,540	1,760	660
27	4,600	1,120	28,300	1,900	3,080	519	180	111	344	3,470	1,570	738
28	4,130	1,050	33,500	1,630	3,470	552	184	118	288	3,270	1,380	821
29	3,270	.....	26,900	2,370	5,330	587	180	138	254	2,710	1,270	864
30	2,710	.....	19,500	2,710	6,400	486	245	149	222	2,210	1,270	864
31	2,370	.....	13,700	.....	6,120	.....	263	153	.....	1,900	.....	864
Mean	4,260	1,130	7,770	4,270	2,200	1,220	228	137	182	959	2,570	1,360

NOTE.— Daily discharge, February 11 to March 8, estimated from one discharge measurement and comparison with Hudson river stations. Daily discharge, December 25 to 31, estimated from one discharge measurement and comparison with Hudson river stations.

Monthly Discharge of Sacandaga River near Hadley, N. Y.

[Drainage area, 1,060 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	6,980	2,050	4,260	4.02	4.64
February	2,210	650	1,130	1.07	1.11
March	33,500	850	7,770	7.33	8.45
April	11,300	1,630	4,270	4.03	4.50
May	6,400	864	2,200	2.08	2.40
June	5,080	486	1,220	1.15	1.28
July	366	172	228	0.215	0.25
August	254	83	137	0.129	0.15
September	738	62	182	0.172	0.19
October	3,470	214	959	0.905	1.04
November	7,280	864	2,570	2.42	2.70
December	3,270	660	1,360	1.28	1.48

SACANDAGA RIVER NEAR HOPE, N. Y.

This gaging station is located about 3½ miles above the post-office at the village of Hope, 4 miles below the village of Wells, 12 miles above Northville and 1½ miles below the junction of the east and west branches of the Sacandaga river. The drainage area of this station is 494 square miles.

The gage is of the staff type, in two sections. The lower section is a sloping staff gage, reading from 1 foot to 4.30 feet on a slope of 2.5 to 1. A vertical staff gage for high-water records is attached to a rocky cliff in line with the sloping one.

The channel is regular and permanent. The banks are fairly free from timber and are very high and rocky.

Current-meter discharge measurements are made from a cable with a span of 214 feet. During low stages measurements are made by wading. Gage heights are affected by ice during the winter. The maximum discharge recorded at this station during the flood of March, 1913, was 24,800 second-feet, or 50 second-feet per square mile of drainage area. This is somewhat below the actual maximum discharge of the stream during this flood.

Mean Daily Gage Height, in Feet, of Sacandaga River near Hope, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	3.30	3.45	2.90	5.80	4.10	3.60	1.92	1.59	1.42	1.58	2.90	2.80
2.....	3.10	3.30	2.75	5.20	4.20	2.60	1.83	1.64	1.40	1.94	2.80	2.75
3.....	3.85	3.15	2.75	4.80	3.30	3.50	1.78	1.74	1.38	2.44	2.65	2.80
4.....	4.60	3.10	2.85	4.70	3.15	3.40	1.78	1.74	1.36	2.16	2.70	2.85
5.....	4.20	2.95	2.65	5.10	3.40	......	1.76	1.67	1.36	2.00	2.70	2.85
6.....	4.00	2.85	......	4.90	3.30	......	1.73	1.64	1.36	1.84	2.65	2.80
7.....	4.20	2.80	......	4.20	2.75	......	1.71	1.60	1.36	1.86	2.55	3.05
8.....	4.60	2.75	......	4.00	2.95	......	1.68	1.52	1.41	1.79	2.50	4.20
9.....	4.70	2.65	......	4.00	2.60	2.90	1.55	1.46	1.35	1.74	5.70	3.50
10.....	4.20	2.65	......	3.80	2.40	2.85	1.87	1.48	1.27	1.70	6.20	3.50
11.....	4.10	2.60	3.10	4.00	2.90	2.70	1.88	1.49	1.27	1.68	4.80	3.45
12.....	4.20	2.55	2.95	4.20	3.25	2.65	1.87	1.48	1.26	1.75	4.40	3.10
13.....	4.10	2.55	2.90	4.00	3.15	2.60	1.92	1.45	1.26	1.76	4.00	3.15
14.....	3.90	2.75	4.90	3.70	3.05	2.23	1.84	1.43	1.24	1.74	3.80	3.10
15.....	3.75	2.70	5.40	3.60	2.90	2.16	1.78	1.42	1.24	1.68	3.60	3.05
16.....	3.60	2.60	5.60	3.40	......	2.38	1.68	1.42	1.22	1.62	3.45	2.95
17.....	3.80	2.70	4.50	3.40	......	2.24	1.68	1.53	1.40	1.72	3.30	2.85
18.....	4.70	2.70	4.20	3.30	......	2.13	1.53	1.57	1.30	1.57	3.20	2.80
19.....	5.20	2.75	4.20	4.20	......	2.08	1.67	1.48	1.30	1.64	3.10	2.55
20.....	4.80	2.65	4.90	3.80	2.55	2.26	1.67	1.46	1.18	2.75	3.80	2.70
21.....	5.60	2.65	6.20	3.80	2.50	2.25	1.67	1.39	1.32	4.00	3.80	2.60
22.....	5.00	2.85	6.20	3.50	2.70	2.12	1.62	1.38	2.80	3.30	3.60	2.55
23.....	4.30	3.30	5.20	3.35	4.00	2.48	1.62	1.39	2.39	3.00	3.50	2.65
24.....	4.60	3.25	5.10	3.80	4.40	2.43	1.65	......	2.04	2.85	3.40	2.55
25.....	4.30	3.15	7.10	3.40	4.10	2.40	1.69	......	1.90	3.60	3.30	2.50
26.....	4.00	3.00	8.20	3.20	3.70	2.18	1.64	1.42	1.74	4.00	3.15	2.50
27.....	3.90	2.90	9.80	3.05	3.50	2.50	1.62	1.52	1.66	3.90	3.00	2.50
28.....	3.65	2.90	7.80	3.60	4.80	2.38	1.74	1.48	1.62	3.60	2.90	......
29.....	3.40	......	6.60	4.00	5.30	2.07	1.82	1.46	1.72	3.40	2.90	2.30
30.....	3.45	......	5.90	4.20	4.70	1.93	1.73	1.51	1.60	3.30	2.85	......
31.....	3.30	......	5.80	......	......	......	1.65	1.46	......	3.10	......	2.75

NOTE.— Gage heights probably affected by ice from February 10 to March 13, and December 31.

Current-meter Discharge Measurements of Sacandaga River near Hope, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
May 19	C. S. De Golyer	2.96	5	0.2 & 0.8	472	177	1.56	736
May 21	C. S. De Golyer........... .	3.75	5	0.2 & 0.8	650	185	2.60	1,630
May 21	C. S. De Golyer.............	2.65	5	0.2 & 0.8	438	178	1.26	554

Mean Daily Discharge, Second-feet, of Sacandaga River near Hope, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1,090	1,240	......	5,790	2,070	1,400	204	94	54	92	740	666
2.....	900	1,090	......	4,230	2,230	1,400	171	109	50	212	666	632
3.....	1,720	945	......	3,330	1,090	1,290	153	140	46	440	566	666
4.....	2,930	900	......	3,130	945	1,190	153	140	43	303	598	703
5.....	2,230	780	......	3,990	1,190	1,070	147	118	43	235	598	703
6.....	1,920	703	......	3,540	1,090	980	137	109	43	174	535	666
7.....	2,230	666	......	2,230	632	890	130	97	43	182	504	860
8.....	2,930	632	......	1,920	780	810	121	76	52	157	474	2,230
9.....	3,130	566	......	1,920	534	740	84	63	41	140	5,520	1,290
10.....	2,230	......	......	1,650	418	703	185	67	28	127	6,930	1,290
11.....	2,070	......	......	1,920	740	598	189	69	28	121	3,330	1,240
12.....	2,230	......	......	2,230	1,040	556	185	67	27	144	2,560	900
13.....	2,070	......	......	1,920	945	534	204	60	27	147	1,920	945
14.....	1,780	......	3,540	1,520	860	335	174	55	25	140	1,650	900
15.....	1,580	......	4,730	1,400	740	303	153	51	25	121	1,400	860
16.....	1,400	......	5,250	1,190	610	408	121	54	22	103	1,240	780
17.....	1,650	......	2,740	1,190	520	339	121	79	50	134	1,090	703
18.....	3,130	......	2,230	1,090	500	290	79	89	32	89	990	666
19.....	4,230	......	2,230	2,030	580	269	118	67	32	109	900	504
20.....	3,330	......	3,510	1,650	504	349	118	63	18	632	1,650	598
21.....	5,250	......	6,930	1,650	474	344	118	48	36	1,920	1,650	534
22.....	3,760	......	6,930	1,290	598	286	103	46	666	1,090	1,400	504
23.....	2,390	......	4,230	1,140	1,920	463	103	48	413	820	1,290	566
24.....	2,930	......	3,990	1,650	2,550	435	112	50	252	703	1,190	504
25.....	2,390	......	9,900	1,190	2,070	418	124	52	196	1,400	1,090	474
26.....	1,920	......	14,500	990	1,520	312	109	54	140	1,920	945	474
27.....	1,780	......	23,500	860	1,290	474	103	76	115	1,780	820	474
28.....	1,460	......	12,700	1,400	3,330	408	140	67	103	1,400	740	420
29.....	1,190	......	8,160	1,920	4,480	264	167	63	134	1,190	740	367
30.....	1,240	......	6,070	2,230	3,130	208	137	74	97	1,090	703	367
31.....	1,090	......	5,790	......	2,100	......	112	63	......	900	......	367
Mean.	2,260	592	4,350	2,080	1,340	603	138	74.6	96	581	1,480	737

NOTE.— Daily discharge, May 16 to 19 and June 5 to 8, inclusive, and December 28, 30 and 31, estimated.

Monthly Discharge of Sacandaga River near Hope, N. Y.
[Drainage area, 494 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	5,250	900	2,260	4.57	5.27
February	1,240	....	592	1.20	1.25
March	23,500	....	4,350	8.81	10.16
April	5,790	860	2,080	4.21	4.70
May	4,480	418	1,340	2.71	3.12
June	1,400	208	603	1.22	1.36
July	204	79	138	0.279	0.32
August	140	46	74.6	0.151	0.17
September	666	18	96	0.194	0.22
October	1,920	89	581	1.18	1.36
November	6,930	474	1,480	3.00	3.35
December	2,230	367	737	1.49	1.72

NOTE.— Discharge from February 10 to March 13, inclusive, estimated by comparison with Sacandaga river at Hadley.

WEST BRANCH OF SACANDAGA RIVER AT BLACK BRIDGE NEAR WELLS, N. Y.

This station is located on the highway bridge known as Black bridge, about three miles west of the village of Wells and two miles above the junction of the east and west branches of the Sacandaga river. This station replaces the one formerly located at Whitehouse. The drainage area at this point is 211 square miles.

The gage, which is of the chain type, is attached to the upstream side of the bridge and is read twice daily. The channel is composed of rock and is of a permanent nature. At extreme high water the river flows in two channels. Discharge measurements have been made from the bridge and also by wading, the section beneath the bridge having been cleared of boulders for this purpose.

The gage heights are slightly affected by storage dams used for logging purposes. The winter flow is very slightly affected by ice, as the stream at this point is open practically all the year.

This station was established by the United States Geological Survey in coöperation with the New York State Conservation Commission.

Mean Daily Gage Height, in Feet, of West Branch, Sacandaga River, at Black Bridge, near Wells, N.Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	4.50	[a]4.45	4.20	7.00	4.30	4.90	3.05	2.80	2.58	2.72	4.30	3.90
2	4.40	4.40	4.10	6.20	4.55	4.80	3.05	3.20	2.50	3.41	4.10	3.90
3	4.80	4.35	3.90	6.10	4.80	4.70	3.10	3.10	2.50	3.80	4.00	3.85
4	5.60	4.30	3.80	5.90	4.15	4.60	2.88	3.25	2.50	3.65	4.50	3.80
5	5.35	4.20	3.75	6.30	4.75	4.55	2.80	2.88	2.44	3.40	4.10	3.85
6	5.30	4.15	3.80	6.00	4.85	4.35	2.88	2.78	2.44	3.26	3.95	3.80
7	5.60	4.10	4.10	5.25	3.90	4.35	2.80	2.76	2.42	3.18	3.90	3.70
8	6.00	3.90	4.60	5.45	4.60	4.00	2.78	2.72	2.40	3.10	3.80	5.15
9	5.80	3.80	4.20	5.30	3.65	4.20	2.61	2.70	2.42	3.05	6.20	4.75
10	5.70	3.70	4.00	5.15	3.65	4.10	3.12	2.62	2.41	2.95	6.40	4.65
11	5.50	3.60	3.90	5.35	3.41	4.20	3.22	2.64	2.35	2.91	5.90	4.50
12	5.70	3.48	3.85	5.40	4.20	4.15	3.12	2.66	2.35	2.90	5.60	4.35
13	5.50	3.50	3.80	5.15	4.70	3.95	3.18	2.70	2.32	3.00	5.15	4.30
14	5.40	3.65	5.15	4.70	4.60	3.55	3.25	2.62	2.32	2.90	5.10	4.20
15	5.20	3.75	5.30	4.60	4.45	3.10	2.84	2.60	2.32	2.68	5.40	4.10
16	5.10	3.75	6.20	4.40	4.10	3.45	2.82	2.55	2.32	2.66	4.65	4.35
17	5.20	3.75	5.50	4.20	4.20	3.25	2.68	2.51	2.30	2.80	4.50	4.00
18	6.20	3.90	5.45	4.15	3.46	3.08	2.72	2.61	2.38	2.84	4.45	3.90
19	6.40	3.40	5.30	4.55	4.35	2.98	2.71	2.58	2.40	2.82	4.30	3.70
20	6.20	3.60	5.80	4.70	3.90	3.48	2.78	2.48	2.35	4.20	5.20	3.70
21	7.20	3.70	6.20	4.35	3.80	3.20	2.74	2.40	2.31	5.15	5.30	3.70
22	5.90	3.70	7.00	4.30	3.90	3.35	2.71	2.40	4.25	4.90	5.00	3.60
23	5.80	4.20	6.40	4.20	5.35	4.05	2.62	2.52	3.55	4.40	5.35	3.70
24	5.70	4.30	6.30	4.10	5.50	3.90	2.82	2.54	3.50	4.30	4.75	3.65
25	6.40	4.30	9.00	4.20	5.50	3.90	2.92	2.50	3.20	5.30	4.60	3.55
26	5.45	4.50	9.60	4.15	5.20	3.90	2.90	2.42	3.10	5.45	4.45	3.55
27	5.35	4.55	11.00	4.10	4.70	4.20	2.81	2.62	3.10	5.25	4.30	3.42
28	5.45	4.55	8.40	4.00	6.00	4.25	2.80	2.61	2.82	4.65	4.20	3.50
29	5.40	......	7.70	4.45	6.00	3.35	3.10	2.75	2.75	4.90	4.30	3.40
30	4.75	......	7.30	4.40	5.70	4.05	2.94	2.71	2.72	4.60	4.20	3.50
31	4.60	......	7.40	......	5.50	......	2.88	2.58	......	4.50	......	3.80

[a] Doubtful.

NOTE.— Gage heights affected by ice from February 13 to March 10, and December 31.

Current-meter Discharge Measurements of West Branch, Sacandaga River, at Black Bridge, near Wells, N. Y.

DATE.	Hydrographer.	Gage Reading.			Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.					
1913.					Feet.		Sq. ft.	Feet.	Sec.-ft.
May 20[a]	C. S. De Golyer	3.96	3.96	3.96	2.5	0.2 & 0.8	150	71	265
May 20[a]	C. S. De Golyer	3.96	3.96	3.96	2.5	0.2 & 0.8	140	72	266

[a] Made by wading at gage section.

Mean Daily Discharge Second-feet, oj West Branch, Sacandaga River, ctBlack Bridge, near Wells, N.Y

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	517	*a*490	....	3,540	414	770	65	36	17	28	414	251
2	464	464	....	2,120	545	700	65	86	12	122	326	251
3	700	439	....	1,980	700	634	72	72	12	218	287	234
4	1,380	414	....	1,720	347	573	44	94	12	176	517	218
5	1,140	368	....	2,270	667	545	36	44	9	120	326	234
6	1,000	347	....	1,850	735	439	44	34	9	96	269	218
7	1,380	326	....	1,050	251	439	36	32	8	83	251	189
8	1,850	251	....	1,230	573	287	34	28	7	72	218	968
9	1,600	218	....	1,090	176	368	19	26	8	65	2,120	667
10	1,490	189	....	968	176	326	75	20	8	52	2,430	604
11	1,280	163	251	1,140	122	368	89	21	5	47	1,720	517
12	1,490	136	234	1,180	368	347	75	23	5	46	1,380	439
13	1,280	....	218	968	634	269	83	26	4	58	968	414
14	1,180	....	968	634	573	152	94	20	4	46	926	368
15	1,010	....	1,090	573	490	72	40	18	4	24	1,180	326
16	926	....	2,120	464	326	130	38	15	4	23	604	439
17	1,010	....	1,280	368	368	94	24	13	3	36	517	287
18	2,120	....	1,230	347	132	69	28	19	6	40	490	251
19	2,430	....	1,090	545	439	56	27	17	7	38	414	189
20	2,120	....	1,600	634	251	136	34	11	5	368	1,010	189
21	3,990	....	2,120	439	218	86	30	7	3	968	1,090	189
22	1,720	....	3,540	414	251	111	27	7	391	770	846	163
23	1,600	....	2,430	368	1,140	306	20	13	152	464	1,140	189
24	1,490	....	2,270	320	1,280	251	38	14	140	414	667	176
25	2,430	....	10,200	368	1,280	251	48	12	86	1,090	573	152
26	1,230	....	13,500	347	1,010	251	46	8	72	1,230	490	152
27	1,140	....	24,000	326	634	368	37	20	72	1,050	414	124
28	1,230	....	7,600	287	1,850	391	36	19	38	604	368	140
29	1,180	....	5,290	490	1,850	111	72	31	31	770	414	120
30	667	....	4,230	464	1,490	306	51	27	28	573	368	140
31	573	....	4,480	....	1,280	....	44	17	....	517	....	*a*140
Mean	1,410	243	2,970	950	664	307	47.5	26.8	38.7	329	758	288

a Estimated.

Monthly Discharge of West Branch, Sacandaga River, at Black Bridge, near Wells, N. Y.
[Drainage area, 211 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	3,990	464	1,410	6.68	7.70
February	....	....	243	1.15	1.20
March	24,000	....	2,970	14.10	16.26
April	3,540	287	950	4.50	5.02
May	1,850	122	664	3.15	3.63
June	770	56	307	1.45	1.62
July	94	19	47.5	0.225	0.26
August	94	7	26.8	0.127	0.15
September	391	3	38.7	0.183	0.20
October	1,230	23	329	1.56	1.80
November	2,430	218	758	3.59	4.00
December	968	120	288	1.36	1.57

NOTE.— Discharge, February 13 to March 10, inclusive, estimated by comparison with the discharge at Hope and Hadley.

SCHROON RIVER.

SCHROON RIVER AT RIVERBANK, N. Y.

This station is located on the steel highway bridge near Riverbank post-office, between the towns of Warrensburg and Bolton, about 9 miles north of the village of Warrensburg and about 10 miles downstream from the outlet of Schroon lake. It was established September 23, 1907, by the N. Y. State Water Supply Commission in coöperation with the U. S. Geological Survey, to obtain general statistical data in regard to the flow of Schroon river.

There are several dams at the village of Warrensburg used for power purposes. During September, 1907, a timber crib dam was constructed at Starbuckville, about 6 miles above the gaging station, for storage purposes, this affording a head of some 8 feet and ponding water to Schroon lake. Tumble Head falls begin about 1 mile above the gaging station and extend upstream for about a mile farther, affording a total fall of some 30 feet.

The datum of the chain gage attached to the bridge has remained the same during the maintenance of the station. During the winter months the discharge is affected by ice conditions. Conditions for obtaining accurate discharge data are good and a very good rating curve has been developed. All measurements are made from the bridge.

Since 1907, the regimen of flow of Schroon river during the low-water season has been considerably affected by the storage held in Schroon lake.

Information in regard to this station is contained in the annual reports of the U. S. Geological Survey.

Mean Daily Gage Height, in Feet, of Schroon River at Riverbank, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	2.80	3.40	2.25	7.10	3.80	4.10	2.45	1.28	1.22	1.22	1.80	2.40
2.....	2.80	3.40	2.20	6.70	3.80	4.10	2.35	1.32	1.20	1.36	1.80	2.40
3.....	2.80	3.30	2.25	6.30	3.80	4.00	2.25	1.30	1.22	1.34	1.80	2.30
4.....	3.00	3.10	2.25	6.00	3.50	3.90	2.30	1.35	1.20	1.30	1.85	2.30
5.....	3.00	3.00	2.40	6.20	3.50	3.90	2.10	1.45	1.18	1.30	1.90	2.30
6.....	3.10	3.00	2.40	6.60	3.40	3.80	2.05	1.40	1.15	1.35	1.85	2.30
7.....	3.10	2.95	2.40	6.60	3.60	3.40	2.10	1.45	1.20	1.35	1.85	2.25
8.....	3.20	2.95	2.45	6.10	3.20	3.10	1.80	1.38	1.15	1.34	1.85	2.30
9.....	3.40	2.90	2.30	5.70	3.10	3.40	1.32	1.35	1.15	1.39	1.90	2.35
10.....	3.40	2.95	2.45	5.40	3.10	3.30	1.42	1.30	1.15	1.38	2.00	2.40
11.....	3.10	3.30	2.35	4.90	2.95	2.40	1.40	1.32	1.10	1.30	2.05	2.55
12.....	3.20	3.00	2.60	4.60	2.90	2.45	1.38	1.38	1.12	1.30	2.15	2.45
13.....	3.20	3.20	2.55	4.50	2.90	2.40	1.42	1.40	1.15	1.40	2.15	2.50
14.....	3.20	2.80	3.20	4.50	2.80	2.40	1.40	1.35	1.10	1.42	2.15	2.50
15.....	3.00	2.90	3.20	4.40	2.90	2.30	1.45	1.30	1.12	1.45	1.80	2.50
16.....	2.95	2.65	3.10	4.20	2.60	2.35	1.45	1.30	1.10	1.45	2.15	2.45
17.....	3.00	2.55	3.60	4.20	2.60	2.95	1.40	1.30	1.18	1.40	2.20	2.45
18.....	3.10	2.45	3.80	4.00	2.55	2.70	1.45	1.28	1.10	1.45	2.20	2.45
19.....	3.40	2.50	4.00	4.00	2.60	3.20	1.40	1.25	1.12	1.45	2.20	2.40
20.....	3.50	2.30	4.20	3.70	2.65	2.90	1.30	1.32	1.15	1.65	2.30	2.30
21.....	3.70	2.25	4.60	3.60	2.50	2.70	1.40	1.30	1.10	1.70	2.40	2.30
22.....	3.80	2.35	5.20	3.70	2.50	2.10	1.38	1.32	1.25	1.60	2.45	2.35
23.....	3.90	2.35	5.30	3.60	2.65	2.65	1.38	1.30	1.15	1.60	2.50	2.30
24.....	3.90	2.30	5.20	3.60	3.10	3.10	1.40	1.25	1.10	1.60	2.50	2.25
25.....	3.90	2.25	6.00	3.60	3.20	3.00	1.42	1.28	1.18	1.70	2.55	2.30
26.....	3.80	2.15	7.70	3.70	3.40	3.00	1.45	1.22	1.18	1.75	2.50	2.35
27.....	3.80	2.20	9.20	3.70	3.50	3.00	1.30	1.25	1.10	1.80	2.50	2.30
28.....	3.60	2.20	10.60	3.70	4.20	3.00	1.20	1.20	1.10	2.15	2.50	2.50
29.....	3.50	......	9.90	3.80	4.30	1.60	1.35	1.20	1.28	2.45	2.45	2.50
30.....	3.40	......	8.70	3.80	4.20	2.40	1.35	1.25	1.25	2.40	2.40	2.55
31.....	3.30	......	7.60	......	4.20	......	1.30	1.20	......	2.10	......	2.45

NOTE.— Gage heights affected by ice and log jams during the greater part of February and March and the last four days in December.

Current-meter Discharge Measurements of Schroon River at Riverbank, N. Y.

DATE.	Hydrographer.	GAGE READING.			Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.					
1913.					*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Feb. 11 *a*	Frank Weber..............	......	......	3.36	5	0.2 & 0.8	262	69	568
Mar. 4 *a*	R. S. Barnes..............	2.20	2.20	2.20	5	0.2 & 0.8	195	67.5	362
Mar. 20 *b*	C. S. De Golyer..........	4.35	4.32	4.34	5	0.2 & 0.8	320	79	1,590
April 10	C. S. De Golyer..........	5.37	5.37	5.37	5	0.2 & 0.8	403	83	2,980
April 10	C. S. De Golyer..........	5.36	5.35	5.36	5	0.2 & 0.8	397	83	2,930
April 21	C. S. De Golyer..........	3.66	3.66	3.66	5	0.2 & 0.8	293	76	1,340
May 28	C. S. De Golyer..........	3.40	3.40	3.40	2.5	0.2 & 0.8	278	76	993
Aug. 5 *c*	C. S. De Golyer..........	1.42	1.39	1.40	2.5	0.2 & 0.8	74	49	121
Oct. 2 *c*	G. H. Canfield...........	1.36	1.36	1.36	2	0.2 & 0.8	60.6	40	114
Oct. 2 *c*	G. H. Canfield...........	1.36	1.36	1.36	3	0.2 & 0.8	57.5	85	113

a Control under partial ice cover. *b* Logs lodged on control. *c* Made by wading 1,000 feet below gage.

Mean Daily Discharge, Second-feet, of Schroon River at Riverbank, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	721	1,120	390	5,370	1,300	1,560	472	95	83	83	230	450
2.....	721	1,120	370	4,770	1,300	1,560	430	103	79	112	230	450
3.....	721	1,040	390	4,200	1,300	1,470	390	99	83	108	230	410
4.....	836	900	390	3,780	1,070	1,380	410	110	79	99	246	410
5.....	836	800	450	4,060	1,070	1,380	332	134	75	99	262	410
6.....	900	700	450	4,620	1,000	1,300	314	121	70	110	246	410
7.....	900	650	450	4,620	1,140	1,000	332	134	79	110	246	390
8.....	966	620	472	3,920	870	810	230	117	70	108	246	410
9.....	1,120	600	410	3,380	810	1,000	103	110	70	119	262	430
10.....	1,120	585	472	3,000	810	935	126	99	70	117	296	450
11.....	900	570	430	2,400	722	450	121	103	61	99	314	518
12.....	966	570	540	2,330	695	472	117	117	65	99	351	472
13.....	966	570	518	2,220	695	450	126	121	70	121	351	495
14.....	966	570	870	2,220	640	450	121	110	61	126	351	495
15.....	836	570	870	2,100	695	410	134	99	65	134	230	495
16.....	806	565	810	1,890	540	430	134	99	61	134	351	472
17.....	836	518	1,140	1,890	540	722	121	99	75	121	370	472
18.....	900	472	1,300	1,670	518	590	134	95	61	134	370	472
19.....	1,120	495	1,470	1,670	540	870	121	89	65	134	370	450
20.....	1,200	410	1,660	1,380	565	695	99	103	70	186	410	410
21.....	1,380	390	2,060	1,290	495	590	121	99	61	200	450	410
22.....	1,470	430	2,760	1,380	495	332	117	103	89	172	472	430
23.....	1,570	430	2,880	1,290	535	565	117	99	70	172	495	410
24.....	1,570	410	2,760	1,290	810	810	121	89	61	172	495	390
25.....	1,570	390	3,780	1,290	870	750	126	95	75	200	518	410
26.....	1,470	351	6,200	1,220	1,000	750	134	83	75	215	495	430
27.....	1,470	370	8,600	1,220	1,070	750	99	89	61	230	495	410
28.....	1,290	370	10,600	1,220	1,660	750	79	79	61	351	495	390
29.....	1,200	......	9,600	1,300	1,750	172	110	79	95	472	472	390
30.....	1,120	......	6,800	1,300	1,660	450	110	89	89	450	450	390
31.....	1,040	......	6,100	......	1,660	......	99	79	......	332	......	370
Mean...	1,080	592	2,450	2,480	931	795	181	101	72	172	360	432

NOTE.— Daily discharge, February 5 to 15, based on one discharge measurement and comparisons with Hudson river at North Creek and Indian River at Indian lake. Beginning February 16, daily discharge based on a fairly well defined rating curve applicable to backwater conditions prevailing up to the high water of March 25–29, at which time the control evidently changed, so that the same curve became applicable to open-water conditions. Discharge, December 31, estimated from backwater effect indicated by a measurement made January 1, 1914.

Monthly Discharge of Schroon River at Riverbank, N. Y.
[Drainage area, 534 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	1,570	721	1,080	2.02	2.33
February	1,120	351	592	1.11	1.16
March	10,600	370	2,450	4.59	5.29
April	5,370	1,220	2,480	4.64	5.18
May	1,750	495	931	1.74	2.01
June	1,560	172	795	1.49	1.66
July	472	79	181	0.339	0.39
August	134	79	101	0.189	0.22
September	95	61	72	0.134	0.15
October	472	83	172	0.322	0.37
November	518	230	360	0.674	0.75
December	518	370	432	0.809	0.93

PRECIPITATION RECORDS.

Rain gages have been established by this Department at several places on the Upper Hudson drainage area: Precipitation records have been kept as follows:

Daily Precipitation, in Inches, at Troy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	......	0.10	......	0.65	......	......	......	0.07	......	......	......	......
2	......	......	......	......	......	0.12	......	......	......	0.77	......	......
3	......	0.14	0.04	......	......	......	......	......	......	0.12	......	......
4	0.20	0.29	0.10	0.04	......	......	......	0.23	0.07	......	0.11	......
5	0.04	......	0.06	0.16	......	......	......	0.02	0.60	......	......	......
6	......	......	0.17	......	......	......	......	......	0.01	......	......	......
7	0.11	......	......	......	......	......	0.10	0.18	0.02	......	......	......
8	0.20	......	......	......	......	......	......	......	......	......	......	0.28
9	......	......	......	......	......	......	0.18	......	......	......	0.26	......
10	......	......	......	......	......	......	0.15	......	......	......	......	......
11	0.12	0.02	0.25	0.82	......	......	......	......	......	......	......	0.15
12	......	......	......	0.15	......	......	......	......	......	......	......	0.15
13	0.05	......	......	......	0.10	......	......	......	......	0.74	......	......
14	......	......	0.26	0.15	0.01	......	0.65	0.02	......	......	0.10	......
15	......	......	......	......	......	......	......	......	......	0.07	0.07	......
16	......	......	......	......	0.15	......	......	......	......	......	......	......
17	0.20	......	......	......	0.02	0.20	......	......	......	......	0.10	......
18	0.08	0.06	0.02	......	......	......	......	......	0.35	......	......	......
19	......	......	......	......	0.05	......	......	......	0.01	......	0.07	......
20	0.04	......	0.25	......	......	0.30	......	......	0.01	0.96	0.27	......
21	0.12	......	0.06	......	......	0.20	0.01	......	......	......	......	......
22	......	......	0.10	......	0.36	......	0.09	......	1.55	......	......	......
23	0.02	......	......	......	0.81	......	......	0.55	......	......	......	0.35
24	0.02	0.08	0.12	......	0.85	......	0.06	......	......	......	......	0.43
25	......	......	0.10	......	......	......	0.50	......	......	0.58	......	......
26	......	......	1.40	......	0.08	0.02	......	......	......	......	0.05	0.87
27	0.02	0.13	0.95	......	0.10	0.10	......	0.01	......	1.10	......	......
28	......	0.87	0.30	0.04	0.40	0.02	0.35	......	......	......	......	......
29	......	......	......	0.26	0.82	......	0.02	0.54	......	0.09	0.30	......
30	......	......	......	......	......	......	......	0.02	......	0.04	......	......
31	......	......	......	......	......	......	......	......	......	0.02	......	......
Total...	1.22	1.69	4.18	2.27	3.75	0.96	2.11	1.64	2.62	4.49	1.33	2.23

Daily Precipitation, in Inches, at Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1						0.14		0.03		0.56		
2	0.20									0.08		
3	0.12	0.25		0.35				0.32				
4	T		0.09	0.22				T	0.20		0.32	
5	T						0.04					
6	0.28							0.05				T
7	0.79											0.60
8											0.08	
9							0.52				0.71	
10	0.09		0.37	0.57				0.10				
11	0.03		T	0.36						0.57		
12							0.30					
13			0.60	0.10						0.10		
14			T								0.25	
15		T	T		T	0.15						
16	0.28				T						T	
17	0.23							0.07				
18	0.17				T					T		
19			0.18			0.34			0.25	0.38	0.49	
20	0.25		0.20			0.04	0.13					
21		T	0.48		0.15				0.07			
22		0.35			0.75			0.45	1.20			
23	0.03		0.15		0.75				0.28			0.49
24			0.20		0.15		0.40			0.75		
25			0.95							0.63		0.45
26	T	0.15	0.90					0.09		0.24		T
27		1.00	0.91	T	0.45	0.04						
28				0.23	1.14		0.42	0.36			0.59	
29								0.23			T	
30			T									
31	0.10											
Total	2.57	1.75	5.03	1.83	3.39	0.71	1.81	1.70	2.00	3.31	2.44	1.54

T means trace.

Daily Precipitation, in Inches, at Hoosick Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	0.05	0.20		0.71		0.04						
2		T		T				0.12		0.60		
3	0.08		T				T			0.33	T	0.02
4	0.22	0.32		0.05				0.38	0.12		0.24	
5	T		0.04	0.24					0.35		0.11	
6												
7	0.20		0.36	0.40				0.15				0.21
8	0.80					0.20						0.20
9	0.08	T					0.10		0.30		0.29	0.35
10							0.80	0.04			0.36	
11	0.16	T	0.30	0.36				0.40				
12	0.03		0.03	0.58						0.35		
13	0.08			0.06			0.15			0.40		
14			0.32	0.13			0.35			0.21	0.30	
15			0.15								0.04	
16			0.04		0.10					0.13	0.06	
17	0.28	0.05			0.03							
18	0.15								0.23			
19	0.09			0.08			0.17		0.05	0.35		
20			0.13			0.73				0.10	0.37	
21	0.61	T	0.06			0.24	T			0.37		
22		0.06	0.17		0.38				0.55			
23		0.27		0.01	1.05				0.13	0.03		
24	0.07		0.10		0.52			0.15			0.06	0.07
25			0.13		0.06		0.02			0.50	0.04	
26			0.72				0.47			0.84		0.12
27		0.13	0.74							1.50		
28	0.10	1.08	1.14	0.05	0.24	T						
29				0.20	0.90		1.05	0.25			0.36	
30	T							1.05		0.14	0.10	
31			T									
Total	3.00	2.11	4.43	2.87	3.28	1.21	3.11	2.54	1.73	5.85	2.33	0.97

T means trace.

Daily Precipitation, in Inches, at Glens Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1			0.08			0.15		0.03				
2										1.04		
3	0.60	0.17										
4	0.13		0.22	0.15				0.25	0.06		0.07	
5												
6			0.11									
7										0.03		
8	1.10						0.06					1.40
9			0.04				0.25				0.56	
10			0.21					0.36				0.06
11				0.35						0.20		
12	0.15						0.21					
13				0.08						0.05		
14			0.95									
15			0.14			0.34						
16					0.12				0.02			
17									0.15			
18	0.57			0.13	0.09		0.75		0.03	0.09		0.03
19						0.38					0.37	
20			0.59			0.02			0.82	1.55		
21	0.32		0.25				0.03			0.15		
22		0.53		0.02			0.01	0.17	0.81			
23	0.60		0.12									1.11
24			0.04		1.52							
25												
26						0.06		0.45		2.01		0.77
27			5.37		0.30							
28		0.91		0.52	0.91		0.32			0.02		
29	0.17							0.44		0.26	0.49	
30												
31	0.20		0.29									
Total	3.84	1.61	8.41	1.25	2.94	0.95	1.63	1.70	1.89	5.40	1.49	3.37

Daily Precipitation, in Inches, at Corinth, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1		0.22		0.65								
2			0.12			0.12		0.05		0.41		
3	0.72									0.68		
4	0.11							0.20			0.06	
5	0.02		0.23					0.25	0.08			
6	0.62											
7	0.20											0.87
8												0.70
9											0.50	
10							0.27				0.68	
11				0.34								0.05
12	0.26			0.24						0.18		
13				0.12			0.30					
14			1.00									
15			0.25			0.47				0.02		
16			0.12		0.15							
17	0.35								0.06			
18	0.15	0.02							0.11			
19				0.23	0.15		0.35					
20			0.73			0.48				0.92	0.52	
21	0.30		0.43						0.12	0.93		
22		0.50			0.20				1.24	0.08		
23					0.44			0.30	0.66			0.98
24	0.85				0.75							
25			0.20				0.13			1.15		
26			2.10							0.55		0.45
27		0.20	2.25		0.68	0.03		0.40		0.43		
28		0.70	0.82							0.04	0.55	
29				0.65	1.10		0.18	0.48				
30	0.18							0.12		0.06		
31												
Total	3.94	1.64	8.25	2.23	3.47	1.10	1.23	1.80	2.27	5.45	2.31	3.05

Daily Precipation, in Inches, at Northville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1						0.20				0.12		
2												
3	0.71	0.26									0.20	
4	0.18		0.42	0.39					0.20			
5												
6	0.35											0.98
7												
8	1.11						0.10		0.31		1.93	
9			0.13				0.30				0.90	
10			0.25						0.01			
11	0.11	0.08		0.70							0.15	
12							0.35					
13				0.06								
14			1.08									
15						0.20					0.05	
16					0.14							
17	0.60							0.05	0.11			
18				0.49	0.15		0.15					
19						0.67					0.60	
20	0.80		0.65							1.60		
21		0.52								0.20		
22								0.20	1.68			
23	0.56		0.29		1.22		0.30					0.80
24			0.60							0.60		
25			2.22							0.42		
26		0.24	1.43			0.30		0.65		0.20		0.65
27		0.26	0.66									
28				0.25	1.98			0.51		0.12	0.50	
29	0.16						1.52					
30												
31			0.60									
Total	4.58	1.36	8.33	1.89	3.49	1.37	2.72	1.41	2.31	3.26	4.33	2.43

DELAWARE RIVER DRAINAGE BASIN.

DESCRIPTION OF THE DELAWARE RIVER.

The head waters of Delaware river rise in Delaware, Greene and Schoharie counties, N. Y., the source of the main stream, which is commonly known as West branch, to distinguish it from the smaller East or Pepacton branch, being a small lake almost on the line of Schoharie and Delaware counties, at an elevation of 1,886 feet above tide. From this lake it flows southwestward across central Delaware county to Deposit, where it receives Oquaga creek, a large tributary draining eastern Broome county, and turns abruptly to the southeast, forming the boundary line between New York and Pennsylvania until Port Jervis is reached. Here it turns again to the southwest and flows for a distance of about 40 miles along the base of the Shawangunk range until it passes through the water gap, from which point it flows irregularly southward to Trenton. Below Trenton the course is in general southwestward to Delaware Bay. South of Port Jervis it forms the dividing line between Pennsylvania and New Jersey, and for a few miles it is the boundary between Delaware and New Jersey.

East branch rises at Grand Gorge in northeastern Delaware county, and flows parallel to West branch across southern Delaware county, uniting with the latter stream at Hancock.

The total length of the river from the mouth to the head of West branch is about 410 miles; its drainage area, measured at Philadelphia and including Schuylkill river, is 10,100 square miles, of which about 2,580 square miles lie in New York, 5,750 in Pennsylvania, and 1,800 in New Jersey. The river is tidal to Trenton, which lies also at the head of navigation.

DELAWARE RIVER AT PORT JERVIS, N. Y.

This station is located at the toll bridge over the Delaware river at Port Jervis. It was established for the United States Weather Bureau by Irving Righter, City Engineer, Port Jervis, N. Y., October 12, 1904.

This station is maintained for the purpose of flood predictions by the Weather Bureau and the records of gage heights are supplied to the Geological Survey for the purpose of determining the regimen of flow of the upper Delaware drainage.

Mongaup river enters the Delaware from the north about 6 miles above the station and Neversink river, also from the north, enters about one mile below the station.

The river section is affected by ice to a greater or less extent each winter.

Port Jervis city bench-mark, from which the gage was originally established, is a cross located on the door-sill of the schoolhouse on Thompson street near Water street. Elevation above gage datum is 27.75 feet.

Bench-mark No. 2 is top of downstream left corner of pier of toll bridge. Elevation above gage datum, 29.92 feet.

Bench-mark No. 3 is top of right abutment of toll bridge at apex of angle caused by junction of downstream wing-wall. Elevation above gage datum, 29.02 feet. The elevation of the datum of the gage is 414.89 feet above mean sea level.

Conditions of flow at this point are constant and a good rating table has been developed for low and medium stages. Careful comparisons of this station with the Riegelsville and the two Hancock stations indicate that the corrections applied to the gage heights were essentially correct and that the discharge data can be fully relied on.

Mean Daily Gage Height, in Feet, of Delaware River at Port Jervis, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	5.5	4.0	7.0	6.6	4.7	4.4	1.5	1.3	1.2	1.4	2.6	3.3
2	4.8	4.1	5.3	6.2	4.4	4.0	1.6	1.3	1.2	1.8	2.3	3.2
3	4.6	4.2	4.4	5.4	4.1	3.6	1.3	1.3	1.1	2.2	2.1	3.1
4	8.0	3.8	4.2	5.4	4.0	3.4	1.4	1.2	1.1	1.6	2.1	3.1
5	7.1	3.4	4.0	5.5	3.7	4.2	1.5	1.1	1.1	1.4	2.1	3.1
6	6.0	3.4	3.8	5.3	3.7	3.9	1.7	1.1	1.1	1.6	2.1	3.0
7	5.6	3.2	3.4	4.9	3.4	3.2	1.5	1.7	1.1	1.6	2.1	3.0
8	5.6	3.0	3.1	4.6	3.3	3.5	1.5	1.2	1.1	1.6	2.1	3.9
9	11.0	3.0	2.7	4.4	3.3	3.2	1.4	1.4	1.1	1.6	2.8	3.9
10	7.8	2.8	3.3	4.1	3.2	2.9	1.4	1.2	1.1	1.6	9.7	3.7
11	6.8	2.9	4.0	4.1	2.8	2.7	1.4	1.5	1.1	1.5	7.3	3.7
12	6.7	3.0	4.5	6.2	2.7	2.6	1.4	1.3	1.1	1.6	6.1	3.4
13	7.4	2.7	4.4	5.2	2.6	2.6	1.4	1.2	1.1	1.8	5.3	3.4
14	7.0	2.7	4.3	5.9	2.6	2.5	1.4	1.2	1.1	1.7	4.7	3.3
15	5.6	2.7	8.0	5.6	2.4	2.3	1.5	1.2	1.1	1.5	4.6	3.4
16	5.3	2.9	7.3	5.2	2.4	2.3	1.4	1.2	1.1	1.5	4.3	3.3
17	5.0	2.9	6.5	4.9	2.4	2.2	1.4	1.2	1.0	1.5	4.1	3.3
18	5.9	2.8	5.7	4.5	2.4	2.3	1.4	1.2	1.0	1.5	3.8	3.2
19	6.3	2.8	5.1	4.4	2.4	2.2	1.3	1.4	1.0	1.5	4.2	3.2
20	6.1	2.7	4.9	4.2	2.4	2.2	1.3	1.3	1.0	1.6	4.0	3.1
21	5.5	2.7	5.9	3.9	2.3	2.2	1.2	1.2	1.0	2.5	3.9	3.1
22	6.2	2.7	5.6	3.7	2.5	2.2	1.2	1.1	1.6	4.0	3.8	2.9
23	5.4	3.2	5.7	3.5	2.5	2.2	1.2	1.2	2.5	3.4	3.5	2.9
24	5.2	3.9	5.2	3.4	3.8	2.2	1.3	1.2	2.7	3.4	3.4	3.1
25	5.4	4.0	5.6	3.0	4.0	2.0	1.3	1.1	2.5	3.6	3.2	3.3
26	5.0	3.4	5.7	3.0	3.8	1.9	1.3	1.1	1.9	3.6	3.1	3.3
27	4.7	3.0	9.3	3.0	3.4	1.8	1.3	1.0	1.7	4.0	3.1	3.1
28	4.5	3.4	15.0	3.5	3.3	1.8	1.2	1.1	1.6	3.4	3.1	3.2
29	4.4	......	10.0	5.5	4.3	1.7	1.4	1.1	1.5	3.3	3.3	3.2
30	4.0	......	7.9	5.3	5.8	1.6	1.4	1.4	1.4	3.0	3.4	2.8
31	4.0	......	6.9	......	4.7	......	1.4	1.3	......	2.8	......	2.7

NOTE.— One observation at about 8 A. M., daily; read to tenths of a foot. Gage heights, February 16 to 19, inclusive, possibly affected by ice.

Current-meter Discharge Measurements of Delaware River at Port Jervis, N. Y.

DATE.	Hydrographer.	Mean gage reading.	U.S.G.S. meter No.	Lateral interval.	Submergence depth.	Area flowing	Total area.	Total width.	Computed discharge.
1913.				*Feet.*		*Sq. ft.*	*Sq. ft.*	*Feet.*	*Sec.-ft.*
Mar. 8	F. Weber	3.05	877	10	0.2 & 0.8	10	2,250	549	2,910
Mar. 29	F. Weber	9.03	877	15	0.2 & 0.8	10	5,770	631	3,300
May 13	C. S. De Golyer	2.65	896	....	0.2 & 0.8	15	2,010	532	2,420
Aug. 9	G. H. Canfield	1.41	764	....	0.2 & 0.8	10	991	370	640

Mean Daily Discharge, Second-feet, of Delaware River at Port Jervis, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	12,100	5,800	20,500	18,000	8,520	7,350	700	510	430	600	2,300	3,840
2	8,930	6,160	11,100	15,700	7,350	5,930	810	510	430	1,040	1,760	3,590
3	8,100	6,530	7,300	11,600	6,270	4,670	510	510	430	1,600	1,450	3,350
4	27,500	5,100	6,530	11,600	5,930	4,100	600	430	350	810	1,450	3,350
5	21,200	3,860	5,800	12,100	4,970	6,620	700	350	350	600	1,450	3,350
6	14,600	3,860	5,100	11,100	4,970	5,600	920	350	350	810	1,450	3,120
7	12,500	3,320	3,860	9,350	4,100	3,590	700	920	350	810	1,450	3,120
8	12,500	2,860	3,080	8,120	3,840	4,380	700	430	350	810	1,450	5,600
9	50,900	2,860	2,260	7,350	3,840	3,590	600	600	350	810	2,690	5,600
10	26,000	2,450	3,580	6,270	3,590	2,900	600	430	350	810	40,400	4,970
11	19,200	2,650	5,800	6,270	2,690	2,490	600	700	350	700	22,500	4,970
12	18,600	2,860	7,700	15,700	2,490	2,300	600	510	350	810	15,100	4,100
13	23,200	2,260	7,300	10,700	2,300	2,300	600	430	350	1,040	11,100	4,100
14	20,500	2,260	6,910	14,100	2,300	2,110	600	430	350	920	8,520	3,840
15	12,500	2,260	27,500	12,500	1,930	1,760	700	430	350	700	8,120	4,100
16	11,100	2,260	22,500	10,700	1,930	1,760	600	430	350	700	6,980	3,840
17	9,780	2,260	17,400	9,350	1,930	1,600	600	430	280	700	6,270	3,840
18	14,100	2,260	13,000	7,730	1,930	1,760	600	430	280	700	5,280	3,590
19	16,200	2,260	10,200	7,350	1,930	1,600	510	600	280	700	6,620	3,590
20	15,100	2,260	9,350	6,620	1,930	1,600	510	510	280	810	5,930	3,350
21	12,100	2,260	14,100	5,600	1,760	1,600	430	430	280	2,110	5,600	3,350
22	15,700	2,260	12,500	4,970	2,110	1,600	430	350	810	5,930	5,280	2,900
23	11,600	3,320	13,000	4,380	2,110	1,600	430	430	2,110	4,100	4,380	2,900
24	10,700	5,440	10,700	4,100	5,280	1,600	510	430	2,490	4,100	4,100	3,350
25	11,600	5,800	12,500	3,120	5,930	1,310	510	350	2,110	4,670	3,590	3,840
26	9,780	3,860	13,000	3,120	5,280	1,170	510	350	1,170	4,670	3,350	3,840
27	8,510	2,860	37,300	3,120	4,100	1,040	510	280	920	5,930	3,350	3,350
28	7,700	3,860	84,000	4,380	3,840	1,040	430	350	810	4,100	3,350	3,590
29	7,300	......	42,800	12,100	6,980	920	600	350	700	3,840	3,840	3,590
30	5,800	......	26,800	11,100	13,500	810	600	600	600	3,120	4,100	2,690
31	5,800	......	19,800	......	8,520	......	600	510	......	2,690	......	2,490
Mean	14,900	3,430	15,600	8,940	4,330	2,690	591	464	632	1,990	6,440	3,710

NOTE.—Daily discharge, February 16 to 19, interpolated. The channel was shifted slightly by the flood of March, so that a new discharge rating table is used, beginning April 1, 1913.

Monthly Discharge of Delaware River at Port Jervis, N. Y.

[Drainage area 3,250 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean	Per square mile.	Depth in inches on drainage area.
1913.					
January	50,900	5,800	14,900	4.58	5.28
February	6,530	2,260	3,480	1.06	1.10
March	84,000	2,260	15,600	4.80	5.53
April	18,000	3,120	8,940	2.75	3.07
May	13,500	1,760	4,330	1.33	1.53
June	7,350	810	2,690	0.828	0.92
July	920	430	591	0.182	0.21
August	920	280	464	0.143	0.16
September	2,490	280	632	0.194	0.22
October	5,930	700	1,990	0.612	0.71
November	40,400	1,450	6,440	1.98	2.21
December	5,600	2,490	3,710	1.14	1.31

EAST BRANCH OF DELAWARE RIVER AT FISH EDDY, N. Y.

This gaging station is located at the New York, Ontario and Western railway bridge at Fish Eddy, 5½ miles above the confluence of the east and west branches of the Delaware river at Hancock. The drainage area at this point is 790 square miles.

The gage is of the vertical staff type, in two sections. The channel is composed of coarse gravel and is apparently permanent. During high stages of the stream current-meter measurements are made from a highway bridge in this vicinity. During low stages measurements are made by wading.

During the winter months the flow is somewhat affected by ice. The maximum discharge at this station during the flood of March, 1913, was approximately 33,500 second-feet, or 38.5 second-feet per square mile of drainage area.

This station is maintained by the U. S. Geological Survey in coöperation with the Department of the State Engineer and Surveyor.

Mean Daily Gage Height, in Feet, of East Branch, Delaware River, at Fish Eddy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	5.10	5.10	......	6.80	4.40	4.60	......	2.20	1.92	2.40	3.50	4.40
2	4.70	......	......	5.80	4.30	4.40	......	2.10	1.84	2.85	3.45	4.40
3	6.00	......	......	5.60	4.10	4.00	......	2.00	1.79	2.85	3.45	4.50
4	8.80	......	4.60	5.30	3.80	6.40	......	1.86	1.74	2.55	3.40	4.40
5	7.00	......	4.40	5.90	3.80	5.20	......	1.82	1.71	2.50	3.40	4.30
6	6.30	......	4.20	5.40	3.70	4.60	......	1.78	1.77	2.40	3.35	4.30
7	7.10	......	......	5.10	3.50	4.80	......	2.15	1.81	2.35	3.35	4.60
8	12.50	......	......	4.80	3.45	4.40	......	2.10	1.84	2.35	3.40	4.50
9	9.90	......	......	4.70	3.35	3.80	......	1.98	1.80	2.30	8.80	4.80
10	7.70	......	4.40	4.40	3.25	3.60	......	......	1.78	2.25	10.10	5.00
11	7.00	......	4.20	4.60	3.15	3.50	......	......	1.74	2.20	7.40	......
12	7.40	......	4.40	6.70	3.15	3.40	......	......	1.73	2.15	6.80	......
13	6.70	......	4.10	5.70	3.05	3.30	......	......	1.70	2.15	6.20	......
14	5.90	......	7.30	5.60	3.00	3.05	......	......	1.69	2.05	5.50	......
15	5.60	......	7.90	5.30	2.95	2.95	......	......	1.68	2.15	5.00	......
16	5.40	......	7.30	5.00	2.90	2.85	......	......	1.67	2.30	4.90	......
17	6.10	......	6.30	4.80	2.85	2.80	......	......	1.66	2.35	4.80	......
18	6.70	......	5.50	4.60	2.80	2.75	......	......	1.66	2.30	4.80	......
19	6.80	......	......	4.40	2.80	2.65	......	......	1.69	2.30	4.70	......
20	6.50	......	......	4.20	2.85	2.80	......	......	1.74	3.60	4.70	......
21	6.80	......	6.30	4.10	3.05	2.60	......	......	1.81	4.70	4.60	......
22	6.20	......	6.50	3.90	3.10	2.60	......	2.65	......	4.60	4.60	......
23	5.70	......	5.80	3.80	3.40	2.55	......	2.40	......	4.30	4.60	......
24	6.00	......	6.10	3.80	3.70	2.50	......	2.00	......	......	4.80	......
25	5.60	......	6.30	3.70	3.70	2.45	......	1.94	......	......	5.00	......
26	5.20	......	8.90	3.60	3.60	2.40	1.81	1.88	3.00	......	4.80	......
27	5.00	......	14.90	3.50	3.50	2.35	1.79	1.85	2.60	5.10	4.60	......
28	4.70	......	12.70	4.40	5.80	2.30	2.05	1.81	2.45	4.30	4.50	......
29	4.50	......	8.90	5.20	5.90	2.30	2.20	2.30	2.35	3.80	4.40	......
30	4.40	......	7.40	4.70	5.60	2.25	1.95	2.35	2.35	3.60	4.40	......
31	4.20	......	6.80	......	5.10	......	1.75	2.05	......	3.60	......	......

NOTE.— Gage readings above 6.0 before August 31, observed on temporary gages at highway bridge. Other observations on gage at regular section. Observations suspended, February 2 to 28, inclusive, on account of ice. No gage height records, July 1 to 25, August 10 to 21 and December 11 to 31, inclusive.

Current-meter Discharge Measurements of East Branch, Delaware River, at Fish Eddy, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
1913.			*Feet.*		*Sq. feet.*	*Feet.*	*Sec.-feet.*
Mar. 10.....	Frank Weber.....	c4.46	5	0.2 & 0.8	292	95	1,680
Mar. 12.....	Frank Weber.....	4.30	5	0.2 & 0.8	512	160	1,770
Mar. 13.....	Frank Weber.....	4.21	5	0.2 & 0.8	511	160	1,630
Mar. 19.....	Frank Weber.....	c5.31	4	0.2 & 0.8	1,120	379	2,620
Mar. 27.....	Frank Weber.....	c12.73	11	0.2 & 0.8	4,100	384	19,400
Mar. 31.....	Frank Weber.....	c7.27	10	0.2 & 0.8	1,820	377	5,930
May 9 *a*....	C. S. De Golyer...	3.34	5	0.2 & 0.8	252	179	816
July 31 *b*....	G. H. Canfield....	1.78	4	0.2 & 0.8	125	93	127
Sept. 16 *b*....	R. S. Barnes......	1.57	4	0.2 & 0.8	107	79	78.6
Sept. 16 *b*....	R. S. Barnes......	1.53	4	0.2 & 0.8	103	79	73
Oct. 28.....	R. S. Barnes......	4.37	5	0.2 & 0.8	376	170	1,820

a Made by wading about 250 feet above gage.
b Made by wading about 200 feet below gage.
c From gage on highway bridge, 200 feet above regular gage.

Mean Daily Discharge, Second-feet, of East Branch, Delaware River, at Fish Eddy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	2,740	2,740	3,500	5,010	1,850	2,080	......	256	167	330	950	1,850
2.....	2,200	......	3,000	3,820	1,740	1,850	......	222	145	530	910	1,850
3.....	4,160	......	2,600	3,500	1,520	1,420	......	190	132	530	910	1,960
4.....	9,250	......	2,080	2,040	1,220	4,300	......	150	120	391	870	1,850
5.....	5,390	......	1,850	3,990	1,220	2,890	......	139	112	370	870	1,740
6.....	4,130	......	1,630	3,190	1,130	2,080	......	129	127	330	835	1,740
7.....	5,580	......	1,450	2,740	950	2,330	......	239	137	311	835	2,080
8.....	18,800	......	1,300	2,330	910	1,850	......	222	145	311	870	1,960
9.....	12,000	......	1,550	2,200	835	1,220	......	184	134	292	10,200	2,330
10.....	6,810	......	1,850	1,850	765	1,040	......	160	129	274	13,400	2,600
11.....	5,390	......	1,630	2,080	700	950	......	150	120	256	6,950	......
12.....	6,180	......	1,850	4,830	700	870	......	140	117	239	5,650	......
13.....	4,830	......	1,520	3,660	640	800	......	130	110	239	4,500	......
14.....	3,990	......	5,980	3,500	610	640	......	125	108	206	3,340	......
15.....	3,500	......	7,230	2,040	583	583	......	120	106	239	2,600	......
16.....	3,190	......	5,980	2,600	556	530	......	115	103	292	2,470	......
17.....	3,810	......	4,130	2,330	530	504	......	115	101	311	2,330	......
18.....	4,830	......	3,340	2,080	504	480	......	110	101	292	2,330	......
19.....	5,010	......	3,040	1,850	504	434	......	105	108	292	2,200	......
20.....	4,470	......	3,820	1,630	530	504	......	100	120	1,040	2,200	......
21.....	5,010	......	4,130	1,520	640	412	......	100	137	2,200	2,080	......
22.....	3,970	......	4,470	1,320	670	412	......	434	1,630	2,080	2,080	......
23.....	3,660	......	3,820	1,220	870	391	......	330	1,630	1,740	2,080	......
24.....	3,650	......	3,810	1,220	1,130	370	......	190	1,470	1,220	2,330	......
25.....	3,500	......	4,130	1,130	1,130	350	......	173	1,040	1,130	2,600	......
26.....	2,890	......	9,490	1,040	1,040	330	137	156	610	1,320	2,330	......
27.....	2,600	......	25,600	950	950	311	132	148	412	2,740	2,080	......
28.....	2,200	......	19,400	870	3,820	292	206	137	350	1,740	1,960	......
29.....	1,960	......	9,490	2,890	3,990	292	256	292	311	1,220	1,850	......
30.....	1,850	......	6,180	2,200	3,500	274	176	311	311	1,040	1,850	......
31.....	1,630	......	5,010	......	2,740	......	122	206	......	1,040	......	......
Mean...	4,810		5,000	2,390	1,160	1,030	186	180	345	792	2,880	1,730

NOTE.— Daily discharge, August 10 to 21, inclusive, computed from U.S. Weather Bureau gage heights at Hancock.

Monthly Discharge of East Branch, Delaware River, at Fish Eddy, N. Y.

[Drainage area, 790 square miles.]

MONTH.	Discharge in Second-feet.				Run-off.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	18,800	1,630	4,810	6.09	7.02
February	....	....	870	1.10	1.14
March	25,600	1,300	5,000	6.33	7.30
April	5,010	870	2,390	3.03	3.38
May	3,990	504	1,160	1.47	1.70
June	4,300	274	1,030	1.30	1.45
July	....	122	186	0.235	0.27
August	434	....	180	0.228	0.26
September	1,630	101	345	0.437	0.49
October	2,740	206	792	1.00	1.15
November	13,400	835	2,880	3.65	4.07
December	....	....	1,730	2.19	2.52

Note.—Discharge for February, July 1 to 25, inclusive, and December 11 to 31, inclusive, estimated from records on this stream at Hancock and Port Jervis.

West Branch of Delaware River at Hale Eddy, N. Y.

This gaging station is located at a highway bridge 400 feet west of the Erie railroad station in the village of Hale Eddy, 3¼ miles above the junction of the east and west branches of the Delaware river at Hancock and 4 miles below the power dam of the Deposit Electric Company.

The drainage area at the gaging station is 594 square miles. The gage is of the vertical staff type, in four sections.

The bed of the stream at this place consists of coarse gravel and boulders. Current-meter discharge measurements are made from the highway bridge during high water and by wading during low water. During the winter the gage heights are seriously affected by ice.

The maximum discharge of the stream at this station during the flood of March, 1913, was 25,000 second-feet, or 41 second-feet per square mile of drainage area.

This station is maintained by the United States Geological Survey in coöperation with the Department of the State Engineer and Surveyor.

Mean Daily Gage Height, in Feet, of West Branch, Delaware River, at Hale Eddy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	4.50	4.50	5.60	6.40	2.75	3.80	1.70	1.30	1.20	1.45	2.15	3.30
2.....	4.10	3.60	4.90	5.20	2.45	3.60	1.68	1.30	1.25	1.50	2.20	3.15
3.....	5.50	3.30	4.00	5.10	2.50	3.40	1.50	1.30	1.20	1.50	2.05	3.10
4.....	7.30	3.15	4.10	4.70	2.35	4.00	1.50	1.40	1.25	1.50	2.00	3.05
5.....	5.80	3.05	4.20	5.20	2.25	3.30	1.45	1.40	1.20	1.50	2.00	3.10
6.....	5.40	2.65	4.20	4.80	2.30	3.10	1.45	1.35	1.20	1.50	1.95	2.95
7.....	6.60	2.60	3.10	4.70	2.15	2.90	1.50	1.30	1.25	1.48	1.98	3.15
8.....	10.60	2.65	2.80	4.40	2.10	2.75	1.50	1.30	1.15	1.48	1.95	4.30
9.....	8.60	2.95	3.40	4.20	2.20	2.60	1.48	1.30	1.15	1.40	4.60	4.20
10.....	6.60	2.75	4.20	4.00	2.30	2.60	1.48	1.40	1.15	1.42	7.60	3.50
11.....	6.40	3.35	4.80	4.40	2.05	2.45	1.48	1.35	1.25	1.38	5.60	3.60
12.....	7.50	2.70	4.40	5.20	2.45	2.30	1.42	1.30	1.15	1.30	4.80	3.45
13.....	6.20	......	4.70	4.70	2.10	2.30	1.40	1.20	1.15	1.40	4.60	3.40
14.....	5.40	......	5.60	4.60	2.05	2.15	1.50	1.20	1.15	1.40	4.60	3.50
15.....	5.20	......	6.70	4.50	1.98	1.98	1.50	1.18	1.15	1.45	4.40	3.50
16.....	4.80	......	6.60	4.20	2.05	2.15	1.50	1.15	1.10	1.45	4.00	3.40
17.....	5.80	......	5.50	3.90	2.05	1.90	1.45	1.20	1.10	1.40	3.90	3.25
18.....	6.60	......	4.80	3.80	1.95	2.40	1.50	1.15	1.10	1.35	3.90	3.20
19.....	6.70	......	4.60	3.60	2.00	1.85	1.50	1.22	1.15	1.40	3.80	3.10
20.....	5.60	......	4.90	3.45	1.95	1.90	1.40	1.30	1.20	2.50	4.00	2.60
21.....	6.40	......	5.20	3.40	1.95	2.05	1.40	1.20	1.10	4.00	4.20	2.85
22.....	5.60	......	5.40	3.15	1.95	2.00	1.35	1.20	2.10	3.80	3.90	2.75
23.....	5.20	......	4.70	4.10	2.15	1.90	1.30	1.25	2.05	2.70	3.80	2.75
24.....	5.60	......	5.20	3.50	3.20	1.90	1.35	1.20	2.00	2.50	3.70	3.35
25.....	5.20	......	5.70	2.75	3.30	1.80	1.25	1.20	1.88	2.65	3.60	3.25
26.....	4.70	......	7.90	2.75	2.95	1.75	1.30	1.15	1.65	2.60	3.60	3.25
27.....	4.60	......	13.60	2.50	2.85	1.75	1.30	1.15	1.60	2.80	3.50	2.75
28.....	4.50	......	11.90	2.15	3.05	1.70	1.30	1.20	1.50	2.70	3.45	2.40
29.....	3.90	......	8.60	2.55	5.40	1.60	1.38	1.20	1.40	2.55	3.15	2.50
30.....	3.80	......	7.00	3.00	4.60	1.70	1.40	1.20	1.40	2.40	3.60	2.60
31.....	3.80	......	6.20	......	4.20	......	1.35	1.20	......	2.30	......	2.80

NOTE.— Gage observations suspended, February 13 to 28, inclusive, on account of ice.

Current-meter Discharge Measurements of West Branch, Delaware River, at Hale Eddy, N. Y.

DATE.	Hydrographer.	Mean gage reading.	U.S.G.S. meter No.	Lateral interval.	Submergence depth.	Total area	Total width.	Velocity correction factor.	Corrected discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft*
Mar. 11	Frank Weber.......	4.90	877	5	0.2 & 0.8	789	186	2.59	2,040
Mar. 12	Frank Weber.......	4.79	877	5	0.2 & 0.8	768	172	2.41	1,850
Mar. 27	Frank Weber.......	14.75	877	5	0.2 & 0.8	2,980	222	7.66	22,800
Mar. 31	Frank Weber.......	6.22	877	5	0.2 & 0.8	1,110	220	2.82	3,130
May 8	C. S. De Golyer.....	2.28	896	5	0.2 & 0.8	419	198	0.65	272
July 30a	G. H. Canfield......	1.32	764	3	0.2 & 0.8	144	105	0.39	56.3

a Measurement made by wading about 500 feet below gage.

Mean Daily Discharge, Second-feet, of West Branch, Delaware River, at Hale Eddy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	1,660	1,660	2,590	3,350	495	1,140	126	50	36	75	251	805
2	1,360	1,000	1,980	2,240	362	1,000	122	50	43	84	268	715
3	2,500	805	1,280	2,160	382	870	84	50	36	84	219	685
4	4,360	715	1,360	1,820	323	1,280	84	66	43	84	204	658
5	2,770	658	1,430	2,240	286	805	75	66	36	84	204	685
6	2,410	447	1,430	1,900	304	685	75	58	36	84	190	602
7	3,560	424	685	1,820	251	575	84	50	43	80	198	715
8	9,760	447	520	1,580	234	495	84	50	30	80	190	1,500
9	6,050	602	870	1,430	268	424	80	50	30	66	1,740	1,430
10	3,560	495	1,430	1,280	304	424	80	66	30	70	4,720	935
11	3,350	838	1,900	1,580	219	362	80	58	43	63	2,590	1,000
12	4,600	470	1,580	2,240	362	304	70	50	30	50	1,900	902
13	3,150	......	1,820	1,820	234	304	66	36	30	66	1,740	870
14	2,410	......	2,590	1,740	219	251	84	36	30	66	1,740	935
15	2,240	......	3,670	1,660	198	198	84	34	30	75	1,580	935
16	1,900	......	3,560	1,430	219	251	84	30	24	75	1,280	870
17	2,770	......	2,500	1,210	219	176	75	36	24	66	1,210	775
18	3,560	......	1,900	1,140	190	342	84	30	24	58	1,210	745
19	3,670	......	1,740	1,000	204	163	84	39	30	66	1,140	685
20	2,590	......	1,980	902	190	176	66	50	36	382	1,280	424
21	3,350	......	2,240	870	190	219	66	36	24	1,280	1,430	548
22	2,590	......	2,410	715	190	204	58	36	234	1,140	1,210	495
23	2,240	......	1,820	1,360	251	176	50	43	219	470	1,140	495
24	2,500	......	2,240	935	745	176	58	36	204	382	1,070	838
25	2,240	......	2,680	495	805	150	43	36	171	447	1,000	775
26	1,820	......	5,090	495	602	138	50	30	115	424	1,000	775
27	1,740	......	18,700	382	578	138	50	30	104	520	935	495
28	1,660	......	13,200	251	658	126	50	36	84	470	902	342
29	1,210	......	6,050	403	2,410	104	63	36	66	403	715	382
30	1,140	......	4,000	630	1,740	126	66	36	66	342	1,000	424
31	1,140	......	3,150	......	1,430	......	58	36	......	304	......	520
Mean	2,900	615	3,170	1,370	486	393	73.6	43.4	65	242	1,140	741

NOTE.— No records, February 13 to 28, inclusive, on account of ice.

Monthly Discharge of West Branch, Delaware River, at Hale Eddy, N. Y.
[Drainage area, 594 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	9,760	1,140	2,900	4.88	5.63
February	....	....	615	1.04	1.08
March	18,700	520	3,170	5.34	6.16
April	3,350	251	1,370	2.31	2.58
May	2,410	190	486	0.82	0.95
June	1,280	104	393	0.663	0.74
July	126	43	73.6	0.124	0.14
August	66	30	43.4	0.073	0.08
September	234	24	65	0.109	0.12
October	1,280	50	242	0.407	0.47
November	4,720	190	1,140	1.92	2.14
December	1,500	342	741	1.25	1.44

NEVERSINK RIVER DRAINAGE BASIN.

DESCRIPTION.

The Neversink river is formed by the confluence of the east and west branches of Neversink creek, in the western part of Ulster county. It flows in a southerly direction across the counties of Sullivan and Orange into Delaware river at Port Jervis.

Its principal tributaries are Sheldrake creek, coming in from the west through a chain of lakes and joining the river at Thompsonville, about 25 miles from the mouth, and Bush kill, a small tributary from the same side, joining at Oakland Valley, some 12 miles farther downstream. From the east Brasher kill, a tributary of considerable importance, formed by the Pine kill and Garmaeu, flows into the Neversink near Godeffroy, about 9 miles from Port Jervis and just above the gaging station, which is located at the suspension highway bridge at this point.

The river drains a narrow valley along the southern slope of the Catskill mountains. There are several reservoirs in the upper watershed, two of which are now in use. The principal power is located at Rose's Point, near Cuddebackville, in the vicinity of the old Delaware and Hudson canal. About one-half mile above this point is a low concrete dam, which diverts water through the old feeder ditch to the plant. This plant supplies Port Jervis, Middletown and other small places in the vicinity with electric light and power.

NEVERSINK RIVER AT GODEFFROY, N. Y.

This station is located at the suspension highway bridge about one-half mile east of the town of Godeffroy and eight miles above the mouth of the river. A staff gage was established at this point, August 4, 1903, and was washed out October 9, in the same year. A new gage was established August 22, 1909, to obtain general statistical and comparative data regarding the flow of the Neversink, and this is maintained by U. S. Geological Survey in coöperation with the State Engineer's Department. This was an enameled iron staff gage bolted to the river face, downstream side of the left-hand abutment. This gage was removed by floods in

January, 1910; replaced by chain gage fastened to cantilever arm on left-hand downstream tower on August 1, 1910. Length of chain, 20.50 feet, making datum same as for old gage.

Bench-mark No. 1 is on the outer corner base stone, right-hand downstream tower, marked with crow's-foot and circle; elevation, 15.996. Bench-mark No. 2 is a spike in a birch tree 14 inches in diameter, blazed 3 feet above the ground, on left-hand side of west approach to bridge, 10 feet from upstream tower; elevation 16.140. Both points are referred to zero of the gage. The datum of the new gage is 0.98 foot lower than the gage of 1903. Therefore all previously published gage heights for this station should have 0.98 foot added, in order to apply to the present datum. The new gage datum has remained the same during the maintenance of the station. Conditions are good for accurate discharge measurements during the open-water period, except for extreme lower water, when wading measurements have to be resorted to, or a bridge about one mile farther downstream used. Area of drainage basin above station is 314.4* square miles; area above mouth, 346 * square miles.

Estimates of daily discharge for this station are withheld, pending further investigations regarding diurnal fluctuations due to operation of mills and power plants above. Current-meter measurements and daily gage heights for this station are being published in order to make them available to the public. Any use of these data should be made with full knowledge of the uncertain conditions under which they were obtained.

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* From Bien's Atlas of New York State.

Mean Daily Gage Height, in Feet, of Neversink River at Godeffroy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	4.00	3.88	4.80	4.60	4.50	3.50	3.05	3.08	2.92	2.98	3.90	4.10
2.....	3.98	3.92	4.65	4.60	4.30	3.55	3.00	3.32	2.95	4.20	3.60	4.09
3.....	4.20	3.88	4.20	4.40	4.10	3.42	3.05	3.20	2.85	3.88	3.48	4.10
4.....	5.20	......	3.45	4.50	4.10	3.38	3.00	3.10	2.98	3.28	3.48	4.10
5.....	4.90	......	......	4.50	4.05	3.40	3.05	3.05	2.92	3.08	3.40	4.00
6.....	4.80	......	......	4.25	3.78	3.42	2.98	3.05	3.00	3.18	......	3.82
7.....	4.70	......	3.37	4.40	3.62	3.45	3.12	2.82	2.90	3.18	......	3.60
8.....	6.80	......	3.50	4.50	3.70	3.42	3.08	2.98	2.95	3.10	......	3.85
9.....	5.40	......	3.40	4.50	3.62	3.38	3.00	2.92	3.00	3.05	......	4.05
10.....	4.90	......	3.40	4.50	3.48	3.42	3.05	2.98	2.88	3.18	......	4.09
11.....	5.00	......	3.58	5.20	3.52	3.32	3.05	2.82	2.85	3.12	......	3.65
12.....	4.70	......	3.45	5.60	3.48	3.42	3.08	2.82	2.92	3.25	4.60	3.50
13.....	4.60	......	3.38	5.20	3.45	3.38	3.00	2.75	2.90	3.28	4.40	3.50
14.....	4.60	......	5.60	4.75	3.48	3.38	3.08	2.80	2.85	3.30	4.30	3.58
15.....	4.50	......	5.70	4.40	3.40	3.35	2.98	2.92	2.88	3.30	4.00	3.55
16.....	4.30	3.70	5.60	4.40	3.42	3.38	3.02	2.98	2.85	3.35	4.05	3.40
17.....	4.10	3.82	5.30	4.40	3.52	3.32	3.02	2.90	2.88	3.22	4.10	3.50
18.....	4.15	3.72	4.80	4.20	3.42	3.32	3.05	2.98	2.85	3.22	4.10	3.48
19.....	4.00	3.78	4.20	4.05	3.42	3.32	3.10	2.92	2.78	3.08	3.98	3.28
20.....	4.20	3.72	4.60	3.80	3.38	3.28	3.02	2.92	2.90	3.80	4.00	3.15
21.....	4.05	3.85	5.20	3.80	3.42	3.30	2.98	2.80	2.82	4.80	4.10	3.05
22.....	4.15	3.72	4.90	3.70	3.38	3.32	2.95	2.95	4.20	4.60	3.98	3.12
23.....	4.20	2.72	4.65	3.55	3.55	3.22	3.00	2.90	3.58	4.80	3.75	3.30
24.....	4.10	3.80	4.50	3.58	4.65	3.28	3.02	2.95	3.48	5.10	3.58	3.32
25.....	4.15	3.60	4.30	3.55	4.60	3.22	3.02	2.90	3.22	5.10	3.45	3.42
26.....	4.10	3.75	4.50	3.50	4.40	3.18	3.00	2.88	3.12	5.00	3.50	3.62
27.....	3.98	3.78	7.60	3.48	4.55	3.10	3.05	2.85	3.15	4.50	3.65	3.80
28.....	3.98	4.55	7.20	5.00	4.75	3.02	3.00	2.85	3.05	4.20	3.55	3.82
29.....	3.80	......	5.60	5.20	4.40	3.10	3.00	2.98	2.92	4.10	3.95	3.85
30.....	3.92	......	4.50	4.70	4.20	2.95	2.98	2.90	2.78	4.05	4.05	3.85
21.....	3.85	......	4.50	......	3.82	......	3.02	2.92	......	4.00	......	3.82

NOTE.— Observations suspended, Feb. 4 to 15, inclusive, on account of ice. Gage heights are mean of two readings per day. Some of the discharge measurements made during 1913 indicate that the rating may have changed from that published in the 1912 report.

Current-meter Discharge Measurements of Neversink River at Godeffroy, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Mar. 7	Frank Weber..............	3.37	5	0.2 & 0.8	474	156	0.57	260
May 15 *a*	C. S. De Golyer............	3.52	5	0.2 & 0.8	349	176	0.91	316
May 15	C. S. De Golyer............	3.41	5	0.2 & 0.8	479	156	0.57	272
Aug. 7 *b*	G. H. Canfield.............	2.78	2	0.2 & 0.8	82.8	66	0.78	64.2
Aug. 7 *b*	G. H. Canfield.............	2.78	2	0.2 & 0.8	84.1	72	0.76	64.3

a Measurement made by wading 250 feet below gage. *b* Measurement made by wading, 700 feet below gage.

MONGAUP RIVER DRAINAGE BASIN.

DESCRIPTION.

The Mongaup river rises near the village of Bradley in Liberty township, Sullivan county. It flows in a southerly direction through Sullivan county to the Delaware river, into which it empties near the village of Mongaup, about 6 miles northwest of Port Jervis.

The stream has a rather narrow, precipitous, well-timbered drainage basin, which is cut up by numerous small tributaries that form outlets to the various small lakes which characterize this drainage. Among the more important of these tributaries are Middle Mongaup, which joins near Bushville, West Mongaup, which joins near Mongaup Valley, and Black Lake creek, about 6 miles farther downstream. These tributaries are all from the right, while from the left enters Kinne brook, about 3 miles below Mongaup Valley, and Black brook, some 8 or 10 miles farther downstream. The last 6 or 7 miles of the stream's course are along the boundary line between Orange and Sullivan counties.

Throughout its course the stream is very precipitous and it offers several opportunities for power development, the most important of which is Mongaup falls, some 8 or 10 miles above the mouth.

MONGAUP RIVER NEAR RIO, N. Y.

This station is located at the steel highway bridge near Partridge Ranch, about 6 miles above Mongaup village and about 14 miles from Port Jervis, N. Y. A standard chain gage was established at this point, December 8, 1906, to obtain general statistical and comparative data regarding the flow of the Mongaup. This station is maintained by the U. S. Geological Survey in coöperation with the State Engineer's Department of New York. On account of inability to obtain reliable gage readings, earlier observations at this station have not been published.

The chain has a length of 15.14 feet and is referred to the following bench-marks: No. 1, highest point on a large boulder about fifty feet south of the downstream side of the right abutment marked with the letters "B. M."; elevation 6.118. No. 2, a point on the bridge-seat on the downstream, right abutment; elevation 12.07.

The bridge has a span of 140 feet. There is one channel at all stages and measurements are made from the downstream side of the bridge. The channel above the station is straight for about 500 feet and during low and medium stages is divided into two parts by a small island just above the bridge. The channel below the bridge is straight for about 200 feet, when it makes an abrupt turn to the right. The banks on either side are of medium height and are rarely overflowed, except during extreme high stages. Conditions for measuring at this point are fairly good, except in low stages, when the current becomes rather sluggish. Low-water measurements are usually made by wading at the ripples below the bridge.

This station was discontinued June 27, 1913, when the gage reader moved away and no one was available to take his place.

Mean Daily Gage Height, in Feet, of Mongaup River near Rio, N. Y.

DAY.	Jan.	Feb.	Mar	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	2.20	1.90	2.35	2.45	2.00	1.39	......	......	......	......	......	......
2	1.95	1.50	1.75	2.30	1.39	1.34	......	......	......	......	......	......
3	2.50	1.45	1.75	2.20	1.75	1.28	......	......	......	......	......	......
4	3.00	1.55	1.65	2.10	1.65	1.22	......	......	......	......	......	......
5	2.40	1.50	1.60	2.30	1.60	1.18	......	......	......	......	......	......
6	2.20	1.48	1.55	2.15	1.55	1.14	......	......	......	......	......	......
7	2.25	1.60	1.42	2.20	1.50	1.15	......	......	......	......	......	......
8	4.00	1.60	1.50	1.90	1.50	1.48	......	......	......	......	......	......
9	2.80	1.55	1.45	1.80	1.45	1.24	......	......	......	......	......	......
10	2.70	1.60	1.42	1.70	1.38	1.16	......	......	......	......	......	......
11	2.70	1.42	1.70	2.10	1.31	1.12	......	......	......	......	......	......
12	2.90	1.50	1.80	3.20	1.26	1.05	......	......	......	......	......	......
13	2.45	1.48	1.60	2.60	1.28	1.00	......	......	......	......	......	......
14	2.10	1.48	2.80	2.70	1.22	1.04	......	......	......	......	......	......
15	2.05	1.50	3.00	2.40	1.16	0.90	......	......	......	......	......	......
16	2.00	1.48	2.70	2.15	1.15	0.92	......	......	......	......	......	......
17	2.40	1.42	2.30	1.95	1.14	0.92	......	......	......	......	......	......
18	2.35	1.50	2.00	1.85	1.11	0.89	......	......	......	......	......	......
19	2.30	1.50	1.95	1.70	1.14	0.88	......	......	......	......	......	......
20	2.15	1.32	2.40	1.80	1.09	0.90	......	......	......	......	......	......
21	2.40	1.39	2.30	1.60	1.01	1.01	......	......	......	......	......	......
22	2.20	1.65	2.50	1.60	1.16	0.95	......	......	......	......	......	......
23	2.00	2.15	2.20	1.50	1.49	0.90	......	......	......	......	......	......
24	2.15	1.80	2.25	1.50	1.75	0.86	......	......	......	......	......	......
25	2.00	1.60	2.15	1.70	1.85	0.86	......	......	......	......	......	......
26	1.90	1.50	3.00	1.55	1.55	0.81	......	......	......	......	......	......
27	1.90	1.55	5.20	1.48	1.48	0.80	......	......	......	......	......	......
28	1.80	2.60	4.60	2.60	1.65	......	......	......	......	......	......	......
29	1.55	......	3.40	2.90	1.65	......	......	......	......	......	......	......
30	1.55	......	3.00	2.40	1.70	......	......	......	......	......	......	......
31	1.70	......	2.80	......	1.50	......	......	......	......	......	......	......

NOTE.— Gage heights probably not seriously affected by ice. Station discontinued, June 27, 1913.

Current-meter Discharge Measurements of Mongaup River near Rio, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
May 14 *a*	C. S. De Golyer	1.22	2.5	0.2 & 0.8	102	106.5	1.41	146
May 14 *b*	C. S. De Golyer	1.21	5	0.2 & 0.8	172	138	0.84	145
Aug. 8 *c*	G. H. Canfield	0.76	2	0.2 & 0.8	42.4	49	1.24	52.5

a Measurement made by wading 75 feet below gage. *b* Measurement made by wading 800 feet above gage. *c* Measurement made by wading 1,500 feet above gage.

SUSQUEHANNA RIVER DRAINAGE BASIN.

DESCRIPTION OF SUSQUEHANNA RIVER.

Susquehanna river rises in Otsego lake, in northern Otsego county, N. Y., at an elevation of 1,193 feet above tide and flows in a general southerly direction into Chesapeake bay. Its course is in many places extremely tortuous, crossing the state boundary between New York and Pennsylvania three times. The entire length of the river is about 500 miles, and it drains an area of 27,400 square miles, of which 21,060 square miles lie in Pennsylvania, 6,080 in New York, and 260 in Maryland.

The topography of the basin varies widely in character. In New York the stream and its tributaries flow through a rolling and in places rather broken country. In this part of the course its bed is of gravel or sand, with occasional rock ledges, and its banks are moderately high and not extensively subject to overflow. In Pennsylvania the river enters a mountain region, its banks are high, and it winds and twists among the parallel ranges in a bed composed generally of drift materials, gravel, sand and boulders. In the lower part of its course, from Marietta to Havre de Grace, it occupies a broad, deep valley, varying in width from a few hundred feet to more than a mile, and it is for the most part bounded on either shore by rocky bluffs and table-lands elevated from 100 to 500 feet above its waters.

SUSQUEHANNA RIVER NEAR CONKLIN, N. Y.

This station was established in November, 1912, by the U. S. Geological Survey in coöperation with this Department. It is located at the steel highway bridge between the villages of Conklin and Kirkwood, five and one-half miles above the mouth of the Chenango river at Binghamton.

A vertical staff gage is bolted to the upstream face of the left-hand abutment of the bridge and reads from 7.2 to 19.6 feet. Twelve feet upstream is an inclined staff gage, reading from 0 to 8.4 feet. The channel consists of small boulders and gravel and seems to be of a permanent nature.

The datum of the gage was lowered two feet on January 1, 1913, in order to prevent negative gage heights.

Mean Daily Gage Height, in Feet, of Susquehanna River at Conklin, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	6.10	5.80	6.80	9.00	4.30	4.90	2.60	1.88	1.50	1.72	2.85	4.50
2.....	5.60	5.80	6.80	8.10	4.00	4.60	2.45	1.88	1.59	1.82	2.80	4.40
3.....	6.00	4.60	5.80	7.40	3.80	4.30	2.40	1.85	1.62	1.68	2.80	4.30
4.....	8.60	4.70	5.00	6.90	3.70	4.30	2.40	1.85	1.65	1.82	2.65	4.20
5.....	8.30	4.70	5.00	7.90	3.60	4.00	2.40	1.90	1.65	1.69	2.65	4.20
6.....	7.20	4.40	4.90	6.60	3.50	3.80	2.35	1.85	1.65	1.75	2.65	4.10
7.....	8.60	4.40	......	6.30	3.50	3.70	2.40	1.82	1.56	1.85	2.60	4.10
8.....	13.00	4.40	......	6.00	3.40	3.60	2.35	1.82	1.66	1.91	2.50	4.60
9.....	13.50	4.40	......	5.70	3.35	3.60	2.30	1.82	1.65	1.86	3.00	4.00
10.....	9.80	......	4.60	5.40	3.30	3.50	2.35	1.80	1.65	1.91	7.10	4.70
11.....	8.10	......	6.00	5.30	3.25	3.50	2.35	1.82	1.61	1.86	7.60	4.50
12.....	9.20	......	6.40	6.10	3.10	3.25	2.30	1.75	1.62	1.86	6.30	4.40
13.....	9.40	......	6.10	6.40	2.95	3.15	2.15	1.75	1.60	1.85	5.40	4.30
14.....	7.50	......	6.60	6.00	2.90	3.15	2.15	1.72	1.64	1.85	5.10	4.30
15.....	6.80	......	8.80	5.70	2.90	3.00	2.20	1.75	1.42	1.82	5.30	4.30
16.....	6.50	......	9.30	5.40	2.90	2.85	2.15	1.75	1.32	1.88	5.30	4.30
17.....	6.80	......	8.30	5.20	2.90	2.65	2.05	1.72	1.55	1.89	5.10	4.20
18.....	8.60	......	6.80	4.90	2.80	2.60	......	1.62	1.52	1.88	5.00	4.10
19.....	9.60	......	6.10	4.70	2.90	2.60	......	1.70	1.58	1.92	4.80	4.00
20.....	9.00	......	6.50	4.60	2.80	2.50	......	1.65	1.55	2.20	4.70	3.90
21.....	8.50	......	6.70	4.50	2.75	2.60	......	1.65	1.62	4.20	5.40	3.70
22.....	8.50	......	7.60	4.30	2.80	2.50	......	1.75	2.60	4.20	5.30	3.70
23.....	7.00	5.20	7.10	4.20	3.00	2.70	......	1.68	2.30	3.80	4.90	3.70
24.....	7.30	5.40	6.60	4.20	4.00	2.60	......	1.72	2.20	3.50	4.70	4.30
25.....	7.50	5.00	7.20	4.00	4.80	2.65	......	1.58	2.00	3.15	4.60	4.00
26.....	6.90	......	10.60	4.00	4.40	2.60	......	1.60	1.96	3.15	4.60	4.00
27.....	6.40	......	15.70	3.90	4.00	2.50	......	1.75	1.92	3.20	4.50	4.00
28.....	6.20	6.00	18.20	4.60	4.20	2.55	......	1.68	1.90	3.15	4.40	3.60
29.....	5.70	......	17.00	4.60	5.90	2.50	1.88	1.70	1.84	3.15	4.30	3.30
30.....	4.80	......	12.40	4.40	6.70	2.55	1.82	1.55	1.72	3.05	4.40	3.70
31.....	5.30	......	9.40	......	3.70	......	1.82	1.50	......	2.95	......	3.80

NOTE.— Gage heights affected by ice, February 7 to 28, inclusive.
No observations taken, July 18 to 28, inclusive. Gage datum dropped 2.00 feet on January 1. 1913.

Current-meter Discharge Measurements of Susquehanna River at Conklin, N. Y.

DATE.	Hydrographer.	Mean gage reading.	U. S. G. S. meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Mar. 14	Frank Weber.......	6.93	877	10	0.2 & 0.8	2,650	361	2.88	7,630
Mar. 15	Frank Weber.......	9.07	877	10	0.2 & 0.8	3,470	378	3.78	13,100
Mar. 28	Frank Weber.......	18.20	877	10	0.2 & 0.8	6,970	382	6.52	51,400
Mar. 31	Frank Weber.......	9.10	877	10	0.2 & 0.8	3,530	381	3.71	13,100
May 6	C. S. De Golyer.....	3.50	896	10	0.2 & 0.8	1,470	339	0.90	1,380
July 29 a	G. H. Canfield......	2.00	764	4	0.2 & 0.8	151	125	2.42	302
Sept. 18 b	R. S. Barnes........	1.55	897	5	0.2 & 0.8	208	170	0.71	147

a Made by wading 1,000 feet above gage. b Made by wading 500 feet below gage.

Mean Daily Discharge, Second-feet, of Susquehanna River at Conklin, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	5,720	5,060	7,330	12,800	2,390	3,330	590	249	134	192	828	2,690
2	4,640	5,060	7,330	10,500	1,970	2,840	560	249	134	226	790	2,540
3	5,500	2,840	5,060	8,800	1,720	2,390	530	238	163	249	790	2,390
4	11,800	3,000	3,500	7,600	1,600	2,390	530	238	171	226	685	2,240
5	11,000	3,000	3,500	10,000	1,500	1,970	530	257	171	182	685	2,240
6	8,280	2,540	3,330	6,860	1,400	1,720	590	238	171	202	685	2,100
7	11,800	......	3,160	6,170	1,400	1,600	530	226	148	238	652	2,100
8	26,400	......	3,000	5,500	1,300	1,500	590	226	174	262	590	2,840
9	28,500	......	2,840	4,840	1,250	1,500	471	226	171	241	948	1,970
10	15,200	......	2,840	4,230	1,210	1,400	500	218	171	262	8,040	3,000
11	10,500	......	5,500	4,040	1,170	1,400	500	226	160	241	9,240	2,690
12	13,400	......	6,400	5,720	1,030	1,170	471	202	163	241	6,170	2,540
13	14,000	......	5,720	6,400	907	1,080	385	202	157	238	4,230	2,390
14	9,000	......	6,860	5,500	866	1,080	385	192	168	238	3,680	2,390
15	7,330	......	12,300	4,840	866	948	413	202	120	226	4,040	2,390
16	6,630	......	13,700	4,230	866	828	385	202	106	249	4,040	2,390
17	7,330	......	11,000	3,860	866	685	330	192	146	253	3,680	2,240
18	11,800	......	7,330	3,330	790	652	314	163	139	249	3,500	2,100
19	11,600	......	5,720	3,000	866	652	294	185	152	206	3,160	1,970
20	12,800	......	6,630	3,840	790	590	285	171	146	413	3,000	1,840
21	11,500	......	7,100	2,690	754	652	275	171	163	2,240	4,230	1,600
22	11,500	......	9,240	2,390	790	590	271	202	652	2,240	4,040	1,600
23	7,800	......	8,040	2,240	948	718	266	179	471	1,720	3,330	1,600
24	8,520	......	6,860	2,240	1,970	652	257	192	413	1,400	3,000	2,390
25	9,000	......	8,280	1,970	3,160	685	249	152	303	1,080	2,840	1,970
26	7,560	......	17,700	1,970	2,540	652	245	157	285	1,080	2,840	1,970
27	6,400	......	38,200	1,840	1,970	590	245	202	266	1,120	2,690	1,970
28	5,940	......	51,400	2,840	2,240	621	241	179	257	1,080	2,540	1,500
29	4,840	......	45,000	2,840	5,280	590	249	185	234	1,080	2,390	1,210
30	3,160	......	24,000	2,540	7,100	621	226	146	192	991	2,540	1,600
31	4,040	......	14,000	......	4,840	......	226	134	......	907	......	1,720

NOTE.— Daily discharge, March 7 to 9, inclusive, interpolated. Daily discharge, July 18 to 28 computed from Weather Bureau gage heights at Binghamton and comparison with preceding and following estimates.

Monthly Discharge of Susquehanna River at Conklin, N. Y.
[Drainage area, 2,350 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	28,500	3,160	10,100	4.30	4.96
February	....	....	2,790	1.20	1.25
March	51,400	2,840	11,400	4.85	5.59
April	12,800	1,840	4,820	2.05	2.29
May	7,100	754	1,820	0.774	0.89
June	3,330	590	1,200	0.511	0.57
July	590	226	379	0.161	0.19
August	249	134	200	0.085	0.10
September	652	106	210	0.089	0.10
October	2,240	182	640	0.272	0.31
November	9,240	590	3,000	1.28	1.43
December	3,000	1,210	2,130	0.91	1.05

NOTE.— Discharge, February 7 to 28, inclusive, estimated from hydrograph and comparative studies.

CHENANGO RIVER.

CHENANGO RIVER NEAR CHENANGO FORKS, N. Y.

This gaging station is located two miles by road below Chenango Forks post-office. The drainage area at this point is 1,420 square miles.

The gage is of the inclined staff type, located on the left-hand downstream bank.

The bed of the stream consists of small cobbles mingled with sand and gravel and seems to be permanent.

Current-meter discharge measurements are obtained from a cable during high water and by wading during low water. During winter months the gage heights are somewhat affected by ice.

This station is maintained by the United States Geological Survey in coöperation with the Department of the State Engineer and Surveyor.

Mean Daily Gage Height, in Feet, of Chenango River near Chenango Forks, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	4.90	4.80	......	6.40	3.45	4.80	2.68	2.42	2.30	2.40	3.10	4.00
2	4.40	4.40	......	5.80	3.40	3.70	2.60	2.38	2.30	2.42	2.95	3.80
3	5.20	4.30	......	5.30	3.20	3.55	2.68	2.35	2.30	2.42	2.94	3.60
4	8.40	4.20	......	5.20	3.20	3.45	2.65	2.40	2.35	2.38	2.85	3.50
5	6.80	4.20	......	5.20	3.20	3.40	2.65	2.40	2.35	2.40	2.92	3.50
6	6.80	3.90	......	5.10	3.15	3.25	2.65	2.35	2.35	2.45	2.95	3.40
7	8.60	3.45	......	4.80	3.10	3.25	2.65	2.32	2.30	2.42	2.88	3.40
8	10.10	3.45	......	4.70	3.10	3.30	2.65	2.30	2.30	2.45	2.80	3.70
9	9.00	3.25	......	4.60	3.05	3.20	2.65	2.32	2.30	2.48	2.92	4.20
10	6.90	3.25	5.60	4.40	3.00	3.30	2.65	2.35	2.22	2.32	4.00	3.70
11	6.30	3.10	7.30	4.60	3.00	3.30	2.60	2.30	2.20	2.38	5.10	3.65
12	8.30	......	7.10	5.40	3.00	3.00	2.60	2.30	2.20	2.35	4.90	3.70
13	7.40	......	5.70	5.10	3.00	2.90	2.68	2.35	2.20	2.48	5.60	3.40
14	6.20	......	7.20	4.80	2.91	2.80	2.60	2.40	2.28	2.48	5.00	3.60
15	5.80	......	7.90	4.60	2.75	2.86	2.62	2.28	2.20	2.40	4.20	3.90
16	5.60	......	7.80	4.50	2.76	2.85	2.55	2.30	2.20	2.45	3.95	3.60
17	6.50	......	6.20	4.30	2.90	2.81	2.50	2.30	2.22	2.34	4.10	3.60
18	8.00	......	5.40	4.10	2.92	2.80	2.50	2.28	2.32	2.42	3.95	3.60
19	8.20	......	5.30	4.00	2.94	2.80	2.48	2.25	2.40	2.48	3.80	3.45
20	7.00	......	6.30	3.95	2.91	2.80	2.46	2.22	2.48	2.58	3.75	3.30
21	7.00	......	6.00	3.80	2.92	2.82	2.52	2.20	2.58	3.50	3.90	3.20
22	6.30	......	6.40	3.65	2.98	2.82	2.52	2.25	2.72	3.80	4.30	3.40
23	5.60	......	5.40	3.60	3.35	2.80	2.51	2.35	2.68	3.80	4.10	3.55
24	6.00	......	5.20	3.60	4.40	2.80	2.50	2.32	2.58	3.70	4.30	3.85
25	5.70	......	6.90	3.60	3.90	2.75	2.52	2.35	2.50	3.50	4.20	3.90
26	5.20	......	10.80	3.55	3.50	2.75	2.50	2.32	2.55	3.40	3.90	3.80
27	5.20	......	13.40	3.40	3.55	2.80	2.42	2.35	2.50	3.30	3.80	3.50
28	4.80	......	11.80	3.40	3.75	2.70	2.45	2.35	2.50	3.30	3.60	3.30
29	4.60	......	9.00	3.40	4.80	2.80	2.45	2.35	2.50	3.20	3.70	3.40
30	4.20	......	7.40	3.50	4.70	2.80	2.45	2.35	2.50	3.10	3.90	3.60
31	4.60	......	6.60	......	4.20	......	2.48	2.35	......	3.05	......	3.70

NOTE.— Gage observations suspended, February 12 to March 9, on account of ice.

Current-meter Discharge Measurements of Chenango River at Chenango Forks, N. Y.

DATE.	Hydrographer.	Gage Readings.			Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.					
1913.					Feet.		Sq. ft.	Feet.	Sec.-ft.
Mar. 17 a	Frank Weber	......	......	6.00	10	0.2 & 0.8	1,450	532	5,880
May 5 b	C. S. De Golyer	3.18	3.18	3.18	10	0.2 & 0.8	540	407	722
Aug. 6 c	C. H. Canfield	2.35	2.35	2.35	5	....	133	180	141
Sept. 17 c	R. S. Barnes	2.29	2.26	2.28	5	0.2 & 0.8	127	180	139
Oct. 29	R. S. Barnes	3.12	3.12	3.12	10	0.2 & 0.8	681	310	670

a Measurement is combined flows of Tioughnioga and Chenango rivers, measured just above their confluence in Chenango Forks and about one mile above gages. b Made by wading 150 feet below gage. c Made by wading 450 feet below gage.

Mean Daily Discharge, Second-feet, of Chenango River near Chenango Forks, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	......	......	......	......	......	......	......	......	......	......	......	1,780
2	......	......	......	......	......	......	......	......	......	......	......	1,940
3	......	......	......	......	......	......	......	......	......	......	......	9,100
4	......	......	......	......	......	......	......	......	......	......	......	9,400
5	......	......	......	......	......	......	......	......	......	......	......	6,570
6	......	......	......	......	......	......	......	......	......	......	......	8,500
7	......	......	......	......	......	......	......	......	......	......	......	8,500
8	......	......	......	......	......	......	......	......	......	......	......	5,800
9	......	......	......	......	......	......	......	......	......	......	......	3,550
10	......	......	......	......	......	......	......	......	......	......	......	2,520
11	......	......	......	......	......	......	......	......	......	......	3,960	2,180
12	......	......	......	......	......	......	......	......	......	......	1,860	1,940
13	......	......	......	......	......	......	......	......	......	......	1,940	1,780
14	......	......	......	......	......	......	......	......	......	......	2,180	960
15	......	......	......	......	......	......	......	......	......	......	2,020	1,780
16	......	......	......	......	......	......	......	......	......	......	2,270	1,080
17	......	......	......	......	......	......	......	......	......	......	2,180	1,080
18	......	......	......	......	......	......	......	......	......	......	1,780	960
19	......	......	......	......	......	......	......	......	......	......	1,780	2,270
20	......	......	......	......	......	......	......	......	......	......	1,780	3,550
21	......	......	......	......	......	......	......	......	......	......	1,780	3,960
22	......	......	......	......	......	......	......	......	......	......	1,780	3,350
23	......	......	......	......	......	......	......	......	......	......	1,780	2,020
24	......	......	......	......	......	......	......	......	......	......	1,080	1,780
25	......	......	......	......	......	......	......	......	......	......	1,400	1,860
26	......	......	......	......	......	......	......	......	......	......	1,780	1,700
27	......	......	......	......	......	......	......	......	......	......	1,780	1,780
28	......	......	......	......	......	......	......	......	......	......	1,780	1,540
29	......	......	......	......	......	......	......	......	......	......	1,780	1,540
30	......	......	......	......	......	......	......	......	......	......	1,780	1,700
31	......	......	......	......	......	......	......	......	......	......	......	3,160
Mean	......	......	......	......	......	......	......	......	......	......	1,920	3,210

Mean Daily Discharge, Second-feet, of Chenango River near Chenango Forks, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	3,350	3,160	......	6,830	1,020	3,160	335	188	132	178	660	1,780
2	2,440	2,360	......	5,310	960	1,330	286	168	132	188	531	1,470
3	3,960	2,270	......	4,170	750	1,140	335	155	132	188	523	1,200
4	12,700	2,100	......	3,960	750	1,020	316	178	155	168	453	1,080
5	7,930	2,180	......	3,960	750	960	316	178	155	178	507	1,080
6	7,930	1,620	......	3,750	705	800	316	155	155	203	531	960
7	13,400	1,020	......	3,160	660	800	316	141	132	188	476	960
8	19,400	1,020	......	2,970	660	850	316	132	132	203	416	1,330
9	15,000	800	......	2,790	616	750	316	141	132	219	507	2,100
10	8,210	800	4,840	2,440	572	850	316	155	100	141	1,860	1,330
11	6,570	660	9,400	2,790	572	850	286	132	92	168	3,750	1,260
12	12,400	......	8,800	4,390	572	572	286	132	92	155	3,350	1,330
13	9,700	......	5,070	3,750	572	491	335	155	92	219	4,840	960
14	6,310	......	9,100	3,160	499	416	286	178	124	219	3,550	1,200
15	5,310	......	11,200	2,790	381	461	298	124	92	178	2,100	1,620
16	4,840	......	10,900	2,520	388	453	257	132	92	203	1,700	1,200
17	7,100	......	6,310	2,270	491	423	230	132	100	150	1,940	1,200
18	11,500	......	4,390	1,940	507	416	230	124	141	188	1,700	1,200
19	12,100	......	4,170	1,780	523	416	219	112	178	219	1,470	1,020
20	8,500	......	6,570	1,700	499	416	208	100	219	274	1,400	850
21	8,500	......	5,800	1,470	507	431	241	92	274	1,080	1,620	750
22	6,570	......	6,830	1,260	555	431	241	112	361	1,470	2,270	960
23	4,840	......	4,390	1,200	905	416	235	155	335	1,470	1,860	1,140
24	5,800	......	3,960	1,200	2,440	416	230	141	274	1,330	2,270	1,540
25	5,070	......	8,210	1,200	1,620	381	241	155	230	1,080	2,100	1,620
26	3,960	......	22,200	1,140	1,080	381	230	141	257	960	1,620	1,470
27	3,960	......	34,000	960	1,140	416	188	155	230	850	1,470	1,080
28	3,160	......	26,200	960	1,400	348	203	155	230	850	1,200	850
29	2,790	......	15,000	960	3,160	416	203	155	230	750	1,330	960
30	2,100	......	9,700	1,080	2,970	416	203	155	230	660	1,620	1,200
31	2,790	......	7,370	......	2,020	......	219	155	......	616	......	1,330
Mean	7,360	1,260	7,870	2,600	976	688	266	145	174	482	1,650	1,230

Monthly Discharge of Chenango River near Chenango Forks, N. Y.
[Drainage area, 1,420 square miles.]

MONTH.	Discharge in Second-feet.				Run-off.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	19,400	2,100	7,360	5.18	5.97
February	3,160	....	1,260	0.887	0.92
March	34,000	....	7,870	5.54	6.39
April	6,830	960	2,600	1.83	2.04
May	3,160	381	976	0.687	0.79
June	3,160	348	688	0.485	0.54
July	335	188	266	0.187	0.22
August	188	92	145	0.102	0.12
September	361	92	174	0.123	0.14
October	1,470	141	482	0.339	0.39
November	4,840	416	1,650	1.16	1.29
December	2,100	750	1,230	0.866	1.00

Note.— Discharge for period, February 12 to March 9, estimated from comparative hydrograph and climatologic data.

CHEMUNG RIVER.

DESCRIPTION.

Chemung river is formed at Painted Post, N. Y., by the confluence of Tioga and Cohocton rivers. Cohocton river lies entirely in the state of New York. Tioga river receives, just above its mouth, Canisteo river, a large tributary, which also has its drainage basin in New York to the south of Cohocton. The drainage area of Tioga river, above the Canisteo, is mainly in Pennsylvania. Chemung river flows southeastward through Corning, Elmira and Chemung, crosses tho state line and flows for a short distance in Pennsylvania, then returns to New York, and crosses again to Pennsylvania near Waverly, finally emptying into the Susquehanna near Athens, Bradford county, Pa. The total length of the river is about 40 miles, of which 30 miles lie in New York; the drainage area, measured at the mouth, is 2,520 square miles.

The topographic features of the basin are, as a rule, bold and broad. The hills rise to a height of several hundred feet on either side, within a short distance of the stream. The upland plateau is to a large extent wooded, has impervious soil, no lake storage, and few marsh areas. Tributaries are ramifying and uniformly distributed, though not very numerous, and dry gullies, or flood channels, are common. The main river is sluggish, with low banks and a broad valley or flood plain, which is often overflowed. The concentration of storm waters from the three large streams, which unite just above Corning, makes possible excessive floods. Dikes have been erected in the cities of Elmira and Corning for protection. One of the highest recorded freshets in the stream occurred June 1, 1889. It was preceded by phenomenal rainfall, aggregating several inches in a few hours during the night of May 31. The discharge at this time has been estimated at 67 second-feet per square mile from 2,055 square miles, or 138,000 second-feet.[a]

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[a] Report of Francis Collingwood, C. E., on the protection of the city of Elmira, N. Y., against floods.

CHEMUNG RIVER AT CHEMUNG, N. Y.

This gaging station is located about midway between Chemung, N. Y., and Willawana, Pa., about one-half mile upstream from the state line and about 10 miles above the junction of the Chemung with the Susquehanna. The drainage area at this point is 2,440 square miles.

The gage is of the tape-and-weight type. It is located on the steel highway bridge which replaced the old suspension bridge in this vicinity and on which the gage was formerly fastened.

Gage readings are taken twice daily. The bed of the stream at this station is composed of sand and gravel and is of a fairly permanent nature. Current-meter discharge measurements are made from the bridge. The winter flow is affected by backwater caused by needle ice. The maximum discharge of the river at this station during the flood of March, 1913, was 52,500 second-feet, or 21.5 second-feet per square mile of drainage area.

This station is maintained by the United States Geological Survey in coöperation with the Department of the State Engineer and Surveyor.

Mean Daily Gage Height, in Feet, of Chemung River at Chemung, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	3.90	4.20	4.60	6.40	7.00	4.30	2.55	1.91	1.70	1.76	3.50	3.20
2.....	3.80	3.80	4.80	5.60	6.00	3.90	2.41	1.88	1.73	1.85	3.30	3.10
3.....	4.60	3.20	3.80	5.20	5.30	3.70	2.30	1.82	1.78	2.35	3.15	3.10
4.....	11.10	3.50	3.40	5.60	4.80	3.50	2.26	1.85	1.75	2.25	3.05	3.05
5.....	6.90	3.40	3.30	5.40	4.40	3.30	2.44	1.83	1.72	2.14	2.90	2.90
6.....	5.90	3.20	3.20	5.30	4.20	3.15	2.42	1.86	1.72	2.08	2.85	2.90
7.....	7.30	3.30	3.00	5.00	4.00	3.05	2.36	1.82	1.70	2.00	2.75	2.85
8.....	9.00	......	2.95	4.80	3.80	3.00	2.28	1.82	1.66	1.96	2.75	2.95
9.....	10.20	......	3.00	4.60	3.60	3.05	2.23	2.05	1.69	1.94	3.40	3.20
10.....	6.60	......	4.60	4.40	3.50	2.95	2.27	1.94	1.66	1.91	10.60	2.95
11.....	6.10	......	4.80	4.40	3.40	2.85	2.18	1.89	1.66	1.86	6.70	2.50
12.....	7.10	......	5.20	4.90	3.25	2.75	2.34	1.81	1.66	1.90	5.30	2.75
13.....	7.40	......	4.20	4.60	3.20	2.70	2.26	1.86	1.64	1.88	4.80	2.80
14.....	5.70	......	4.80	4.40	3.10	2.65	2.22	1.79	1.64	2.07	4.80	2.95
15.....	5.30	......	6.90	4.30	3.05	2.55	2.19	1.78	1.60	2.07	5.20	2.90
16.....	5.00	......	6.70	4.20	3.05	2.55	2.19	1.80	1.59	2.06	4.70	2.90
17.....	5.90	......	5.20	4.00	2.95	2.45	2.16	1.80	1.60	1.92	4.70	2.85
18.....	8.10	......	4.40	3.80	2.90	2.42	2.12	1.84	1.62	1.91	4.50	2.80
19.....	8.30	......	4.10	3.60	2.90	2.38	2.10	1.76	1.69	1.89	4.20	2.75
20.....	6.60	......	4.10	3.60	2.80	2.46	2.06	1.73	1.66	2.29	4.10	2.60
21.....	6.90	......	4.40	3.45	2.75	2.46	2.06	1.71	1.70	3.70	4.00	2.70
22.....	6.40	......	4.70	3.35	2.75	2.55	2.04	1.70	2.02	3.90	3.90	2.70
23.....	5.50	......	4.40	3.30	2.90	2.65	2.02	1.75	2.40	3.25	3.70	2.65
24.....	5.90	......	4.20	3.45	3.70	2.55	2.08	1.74	2.37	2.95	3.60	3.10
25.....	5.90	......	6.90	3.60	4.20	2.46	2.15	1.68	2.14	2.85	3.45	3.80
26.....	5.20	......	14.20	3.40	3.80	2.90	2.10	1.76	2.04	5.00	3.40	3.70
27.....	5.00	......	16.20	3.30	3.80	3.20	2.06	1.74	1.96	7.40	3.25	3.10
28.....	4.80	......	14.90	10.00	5.90	3.10	2.06	1.70	1.84	5.20	3.20	3.10
29.....	4.30	......	9.20	13.90	8.00	2.85	2.02	1.74	1.86	4.40	3.15	3.15
30.....	4.10	......	7.50	9.00	5.70	2.65	2.00	1.76	1.74	4.00	3.15	3.20
31.....	4.10	......	6.60	......	4.80	......	1.95	1.76	......	3.70	......	3.25

NOTE.— Gage observations suspended from February 7 to 28, inclusive, on account of ice.

Current-meter Discharge Measurements of Chemung River at Chemung, N. Y.

DATE.	Hydrograph.	Mean gage reading.	U.S.G.S. meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.				*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Mar. 18	Frank Weber	4 31	877	10	0 2 & 0 8	1,310	262	1.96	2,550
May 2	C. S. De Golyer	5 78	8 96	10	0 2 & 0 8	1,870	304	3.01	5,620
May 3	C. S. De Golyer	5 34	896	10	0 2 & 0 8	1,750	301	2.53	4,420
Aug. 1 a	G. H. Canfield......	1 90	764	5	0.2 & 0 8	242	205	0.74	180

a Made by wading 1,000 feet below gage.

Mean Daily Discharge, Second-feet, of Chemung River at Chemung, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	1,880	2,310	2,980	7,050	8,700	2,470	520	184	105	126	1,380	1,060
2.....	1,750	1,750	3,360	5,060	6,050	1,880	436	172	116	160	1,160	960
3.....	2,980	1,060	1,750	4,180	4,400	1,620	370	148	133	400	1,010	960
4.....	23,800	1,380	1,270	5,060	3,360	1,380	350	160	122	345	910	910
5.....	8,410	1,270	1,160	4,620	2,630	1,160	454	152	112	290	770	770
6.....	5,800	1,060	1,060	4,400	2,310	1,010	442	164	112	260	730	770
7.....	9,600	......	860	3,760	2,020	910	406	148	105	220	655	730
8.....	15,200	......	815	3,360	1,750	860	360	148	93	204	655	815
9.....	20,000	......	860	2,980	1,500	910	335	245	102	196	1,270	1,060
10.....	7,570	......	2,980	2,630	1,380	815	355	196	93	184	21,600	815
11.....	6,300	......	3,360	2,630	1,270	730	310	176	93	164	7,840	490
12.....	9,000	......	4,180	3,560	1,110	655	394	144	93	180	4,400	655
13.....	9,900	......	2,310	2,980	1,060	620	350	164	87	172	3,360	690
14.....	5,300	......	3,360	2,630	960	585	330	136	87	255	3,360	815
15.....	4,400	......	8,410	2,470	910	520	315	133	75	255	4,180	770
16.....	3,760	......	7,840	2,310	910	520	315	140	73	250	3,170	770
17.....	5,800	......	4,180	2,020	815	460	300	140	75	188	3,170	730
18.....	12,100	......	2,630	1,750	770	442	280	156	81	184	2,800	690
19.....	12,800	......	2,160	1,500	770	418	270	126	102	176	2,310	655
20.....	7,570	......	2,160	1,500	690	466	250	116	93	365	2,160	550
21.....	8,410	......	2,630	1,320	655	466	250	108	105	1,620	2,020	620
22.....	7,050	......	3,170	1,220	655	520	240	105	230	1,880	1,880	620
23.....	4,840	......	2,630	1,160	770	585	230	122	430	1,110	1,620	585
24.....	5,800	......	2,310	1,320	1,620	520	260	119	412	815	1,500	960
25.....	5,800	......	8,410	1,560	2,310	466	295	99	290	730	1,320	1,750
26.....	4,180	......	39,000	1,270	1,750	770	270	126	240	3,760	1,270	1,620
27.....	3,760	......	49,000	1,160	1,750	1,060	250	119	204	9,900	1,110	960
28.....	3,360	......	42,500	19,200	5,800	960	250	105	156	4,180	1,060	930
29.....	2,470	......	16,000	37,500	11,800	730	230	119	164	2,630	1,010	1,010
30.....	2,160	......	10,200	15,200	5,300	585	220	126	119	2,020	1,010	1,060
31.....	2,160	......	7,570	......	3,360	......	200	126	......	1,620	......	1,110

NOTE.— No record, February 7 to 28, inclusive.

Monthly Discharge of Chemung River at Chemung, N. Y.
[Drainage area, 2,440 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	23,800	1,750	7,220	2.96	3.41
February	....	....	1,080	0.443	0.46
March	49,000	815	7,780	3.19	3.68
April	37,500	1,160	4,910	2.01	2.24
May	11,800	655	2,550	1.05	1.21
June	2,470	418	836	0.343	0.38
July	520	200	317	0.13	0.15
August	245	99	143	0.058	0.07
September	430	73	143	0.058	0.06
October	9,900	126	1,120	0.459	0.53
November	21,600	655	2,690	1.10	1.23
December	1,750	490	868	0.356	0.41

NOTE.— Discharge, February 7 to 28, inclusive, estimated from hydrograph and comparative studies.

ALLEGHENY RIVER DRAINAGE BASIN.

DESCRIPTION OF ALLEGHENY RIVER.

Allegheny river, which, with the Monongahela, forms the Ohio at Pittsburg, rises in northern Pennsylvania, flows north into the state of New York, then flows south through western Pennsylvania. The head waters have an elevation of about 2,500 feet and join those of Genesee river on the north and of the Susquehanna on the east. The total length from the source to the mouth at Pittsburg is about 300 miles, 47 of which are in the state of New York. The principal facts concerning this river have been given in a report by George Lehman, assistant engineer, contained in House Document No. 72, Fifty-fifth Congress, third session. Although this river drains a large area, much of which is of an elevated and even mountainous character, yet it is of comparatively small value for water-power. The total fall in 255 miles, between Olean, N. Y., and the mouth, is only 725 feet, or an average of less than 3 feet per mile. This descent is accomplished without abrupt pitches, and with few rapids having a fall of much consequence. The drainage basin of Allegheny river above Red House is comparatively rugged and precipitous. It is mostly covered with brush and light forest. A considerable amount of snow accumulates in the winter and feeds the stream until late in spring. The basin is underlain by shales of the Chemung series, and the depth of soil is usually small, excepting in stream valleys. There are no lakes and no artificial storage tributary to the stream. The Cuba reservoir, which feeds the Erie canal through Genesee river, lies on the divide between the Allegheny and Genesee drainage basins. A part of the overflow from this reservoir passes into the Allegheny, the rest passes into Genesee river. During about half of the year the river is navigable for small steamers to Franklin, 123 miles above Pittsburg.

ALLEGHENY RIVER AT RED HOUSE, N. Y.

This station was established September 4, 1903, by Robert E. Horton. It has since been maintained by the U. S. Geological Survey in coöperation with this Department. It is located at the Red House bridge, near the stations of the Erie and Pennsylvania railroads and about 5 miles below Salamanca, N. Y., about 13 miles above the point where the river leaves New York state. At Olean, N. Y., the wasteway from the Cuba reservoir enters the stream through Olean creek. This reservoir is located on the divide between Oil creek, tributary to Allegheny river, and Genesee river. The storage is commonly turned into Genesee river through the abandoned summit level of Genesee Valley canal, but may be diverted into Oil creek through the guard-lock at the head of the canal.

The channel is straight for 800 feet above and below the station, 494 feet wide between abutments, broken by two piers. The current velocity is well distributed. The right bank is high and does not overflow. The left bank overflows only at flood stages. At extreme high water there is an additional flood channel on the left bank. The bed is of gravel and is regular.

Discharge measurements are made from the downstream side of the bridge. The initial point for soundings is the left end of the downstream side of the bridge.

A standard chain gage is fastened to the upstream side of the bridge near the middle of the left span; length of chain, 24.16 feet. The gage was read once each day during 1913. The bench-mark is a circle cut on the downstream side of the left abutment; assumed elevation, 100.00. The elevation of water-surface, when the gage reads zero, is 78.91.

Mean Daily Gage Height, in Feet, of Allegheny River at Red House, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1.....	4.60	4.80	5.40	7.20	7.80	4.45	3.30	3.10	3.00	3.20	3.45	4.10
2.....	4.80	4.60	5.00	6.50	7.30	4.60	3.35	3.10	3.00	3.50	3.75	4.15
3.....	5.00	4.40	4.70	6.10	6.60	4.00	3.40	3.15	3.05	3.55	3.90	4.10
4.....	5.80	4.40	4.60	6.00	5.40	4.25	3.30	3.05	3.00	3.45	4.00	4.00
5.....	6.00	4.15	5.00	6.60	5.20	4.20	3.30	3.05	3.15	3.30	3.85	4.10
6.....	5.80	4.20	5.00	6.00	5.20	4.25	3.20	3.25	3.10	3.45	4.00	4.05
7.....	7.70	4.00	5.20	5.90	5.70	4.40	3.20	3.30	3.20	3.40	4.05	4.10
8.....	10.20	4.00	5.00	5.60	5.40	4.20	3.55	3.30	3.25	3.30	4.00	4.10
9.....	10.30	3.85	5.20	5.40	5.20	4.15	3.45	3.25	3.10	3.30	5.70	4.20
10.....	10.00	3.90	5.20	5.60	4.90	4.00	3.40	3.10	3.15	3.45	5.60	4.10
11.....	9.60	3.80	5.80	5.60	4.95	3.75	3.35	3.10	3.00	3.35	5.40	4.00
12.....	9.60	3.80	6.40	5.60	4.85	3.75	3.40	3.10	3.00	3.40	5.60	4.10
13.....	9.00	3.70	6.00	5.30	4.90	3.65	3.30	3.05	3.00	3.45	6.50	4.05
14.....	7.70	3.65	6.60	5.20	4.35	3.60	3.30	3.10	3.10	3.30	6.50	4.20
15.....	7.00	3.70	6.90	5.20	4.15	3.65	3.40	3.05	3.10	3.35	6.60	4.35
16.....	6.70	3.90	6.40	5.00	3.90	3.70	3.30	3.05	3.10	3.30	6.60	4.25
17.....	7.90	3.70	5.90	4.90	3.80	3.50	3.65	3.20	3.10	3.40	6.50	4.20
18.....	9.10	3.85	5.60	4.70	3.75	3.65	3.55	3.20	3.10	3.35	6.00	4.20
19.....	8.80	4.25	5.30	4.75	3.55	3.65	3.35	3.35	3.05	3.30	6.00	4.15
20.....	7.80	5.40	5.20	4.50	3.75	3.55	3.45	3.20	3.10	3.30	5.20	4.20
21.....	8.30	5.40	5.00	4.30	3.65	3.60	3.35	3.20	3.00	3.30	4.80	4.00
22.....	7.90	5.60	4.80	4.25	3.55	3.55	3.30	3.10	3.10	3.35	4.65	4.10
23.....	7.10	5.60	6.20	4.20	3.65	3.35	3.30	3.10	3.10	3.30	4.55	4.10
24.....	8.20	5.20	8.80	4.20	3.65	3.45	3.30	3.00	3.00	3.50	4.65	4.10
25.....	7.60	5.00	10.80	4.50	3.55	3.45	3.20	3.05	3.00	3.55	4.50	4.25
26.....	7.20	5.40	12.70	6.60	3.60	3.35	3.30	3.00	2.95	3.45	4.50	4.30
27.....	6.60	4.20	12.60	6.80	4.00	3.35	3.25	3.00	2.95	3.55	4.40	4.00
28.....	6.00	5.00	12.20	9.60	6.70	3.45	3.25	3.00	3.00	3.55	4.25	3.90
29.....	5.60	......	11.00	10.20	6.80	3.20	3.20	3.10	3.00	3.45	4.25	3.95
30.....	5.20	......	9.60	9.00	6.50	3.00	3.35	3.10	3.00	3.50	4.35	3.90
31.....	5.20	......	8.70	......	4.85	......	3.25	3.00	......	3.50	......	3.80

NOTE.— One gage reading per day, at about noon. Gage heights not affected by ice.

Current-meter Discharge Measurements of Allegheny River at Red House, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Lateral interval.	Submergence depth.	Total area.	Total width.	Velocity correction factor.	Corrected discharge.
1913.			*Feet.*		*Sq. ft.*	*Feet.*		*Sec.-ft.*
Jan. 21	C. S. De Golyer.............	8.35	10	0.2 & 0.8	2,740	368	4.85	13,300
Mar. 29	C. S. De Golyer.............	11.27	10	*	3,830	355	7.23	27,700
May 1	C. S. De Golyer.............	7.96	10	0.2 & 0.8	2,700	354	4.26	11,500
May 1	C. S. De Golyer.............	7.72	10	0.2 & 0.8	2,580	354	4.03	10,400
Aug. 12	G. H. Canfield............	3.25	10	0.2 & 0.8	1,001	330	0.36	358
Aug. 12	G. H. Canfield.............	3.22	10	0.2 & 0.8	1,006	330	0.34	341

* Surface velocity.

Mean Daily Discharge, Second-feet, of Allegheny River at Red House, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1913.												
1	2,160	2,490	3,690	8,750	10,800	1,820	410	260	200	330	550	1,300
2	2,490	2,160	2,860	6,480	9,100	2,070	455	260	200	600	865	1,370
3	2,800	1,850	2,320	5,300	6,780	1,170	500	295	230	650	1,040	1,300
4	4,010	1,850	2,160	5,090	3,630	1,520	410	230	200	550	1,170	1,170
5	5,100	1,500	2,800	6,780	3,200	1,440	410	230	295	410	980	1,300
6	4,610	1,570	2,800	5,090	3,200	1,520	330	370	260	550	1,170	1,240
7	10,500	1,300	3,260	4,830	4,320	1,740	330	410	330	500	1,240	1,300
8	21,800	1,300	2,860	4,080	3,630	1,440	650	410	370	410	1,170	1,300
9	22,400	1,120	3,200	3,630	3,200	1,370	550	370	260	410	4,320	1,440
10	20,800	1,180	3,260	4,080	2,610	1,170	500	260	295	550	4,080	1,300
11	18,800	1,060	4,610	4,080	2,700	865	455	260	200	455	3,630	1,170
12	18,800	1,000	6,100	4,080	2,520	865	500	260	200	500	4,080	1,300
13	15,900	940	5,100	3,410	2,610	755	410	230	200	550	6,480	1,240
14	10,500	884	6,780	3,200	1,660	700	410	260	260	410	6,480	1,440
15	8,650	910	7,720	3,200	1,370	755	500	230	260	455	6,780	1,660
16	7,580	1,180	6,100	2,800	1,040	810	410	230	260	410	6,780	1,520
17	11,200	940	4,850	2,610	920	600	755	330	260	500	6,480	1,440
18	16,400	1,120	4,140	2,240	865	755	650	330	260	455	5,090	1,440
19	15,000	1,640	3,470	2,330	650	755	455	455	230	410	5,090	1,370
20	10,800	3,690	3,260	1,900	865	650	550	330	260	410	3,200	1,440
21	12,800	3,690	2,800	1,590	755	700	455	330	200	410	2,420	1,170
22	11,200	4,140	2,490	1,520	650	650	410	260	260	455	2,160	1,300
23	8,400	4,140	5,630	1,440	755	455	410	260	260	410	1,980	1,300
24	12,400	3,200	15,000	1,440	755	550	410	200	200	600	2,160	1,300
25	10,200	2,860	25,100	1,900	650	550	330	230	200	650	1,900	1,520
26	8,750	3,090	36,000	6,780	700	455	410	200	175	550	1,900	1,590
27	6,780	1,570	35,400	7,390	1,170	455	370	200	175	650	1,740	1,170
28	5,100	2,800	33,000	18,800	7,080	550	370	200	200	650	1,520	1,040
29	4,140		26,200	21,800	7,390	330	330	260	200	550	1,520	1,100
30	3,200		18,800	15,900	6,480	200	455	260	200	600	1,660	1,040
31	3,200		14,600		2,520		370	200	......	600	......	920
Mean	10,200	2,000	9,570	5,420	3,050	922	450	278	237	505	2,990	1,310

NOTE. — Discharge rating slightly changed. New rating table used, beginning April 1, 1913.

Monthly Discharge of Allegheny River at Red House, N. Y.

[Drainage area, 1,640 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1913.					
January	22,400	2,160	10,200	6.22	7.17
February	4,140	884	2,000	1.22	1.27
March	36,000	2,160	9,570	5.84	6.73
April	21,800	1,440	5,420	3.30	3.68
May	10,800	650	3,050	1.86	2.14
June	2,070	200	922	0.562	0.63
July	755	330	450	0.274	0.32
August	455	200	278	0.170	0.20
September	370	175	237	0.145	0.16
October	650	330	505	0.308	0.36
November	6,780	550	2,990	1.82	2.03
December	1,660	920	1,310	0.799	0.92

CONCLUSION.

The gaging records as given in this report are considered to represent existing conditions with a reasonable degree of accuracy. In this class of work much depends on the faithfulness with which gage readers perform their duties and the condition in which gages are maintained. Every effort has been made to see that the gages have been read regularly and correctly and kept in good repair. Varying conditions that would tend to alter rating tables or otherwise modify results have been noticed and allowed for.

In some cases, where several gaging stations are maintained at different points on the same stream, inconsistencies are apparent, but even so, these records are considered valuable, as they present a means of estimating the discharge that otherwise would be totally lacking.

The aim of this report has been to incorporate herein everything available in the form of stream gaging done throughout the state.

Respectfully submitted,
JOHN P. NEWTON,
Assistant Engineer.

RESULTS OF SPIRIT LEVELING IN NEW YORK

1906 TO 1911, INCLUSIVE

R. B. MARSHALL, Chief Geographer

WORK DONE IN COÖPERATION WITH THE STATE OF NEW YORK

Reprinted from Bulletin 514

DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY

BY PERMISSION OF
GEORGE OTIS SMITH, Director

Through the courtesy of the Director of the United States Geological Survey there was included in the annual report of the State Engineer for 1905 a reprint of Geological Survey Bulletin 281, which contained the results of spirit leveling in New York state for the years 1896 to 1905, inclusive. A recent publication, Bulletin 514, gives the results of spirit leveling in New York during the years 1906 to 1911, inclusive, and through the courtesy of the Director, this bulletin is reprinted in the present report. Certain corrections of elevations, chiefly in the Lyon Mountain and Dannemora quadrangles, had been made in the copy of the bulletin furnished by the Director for reprinting. Since the bench marks are arranged by circuits, the index contained in Bulletin 514 is also reprinted, but with page numbers to fit the paging in this report.

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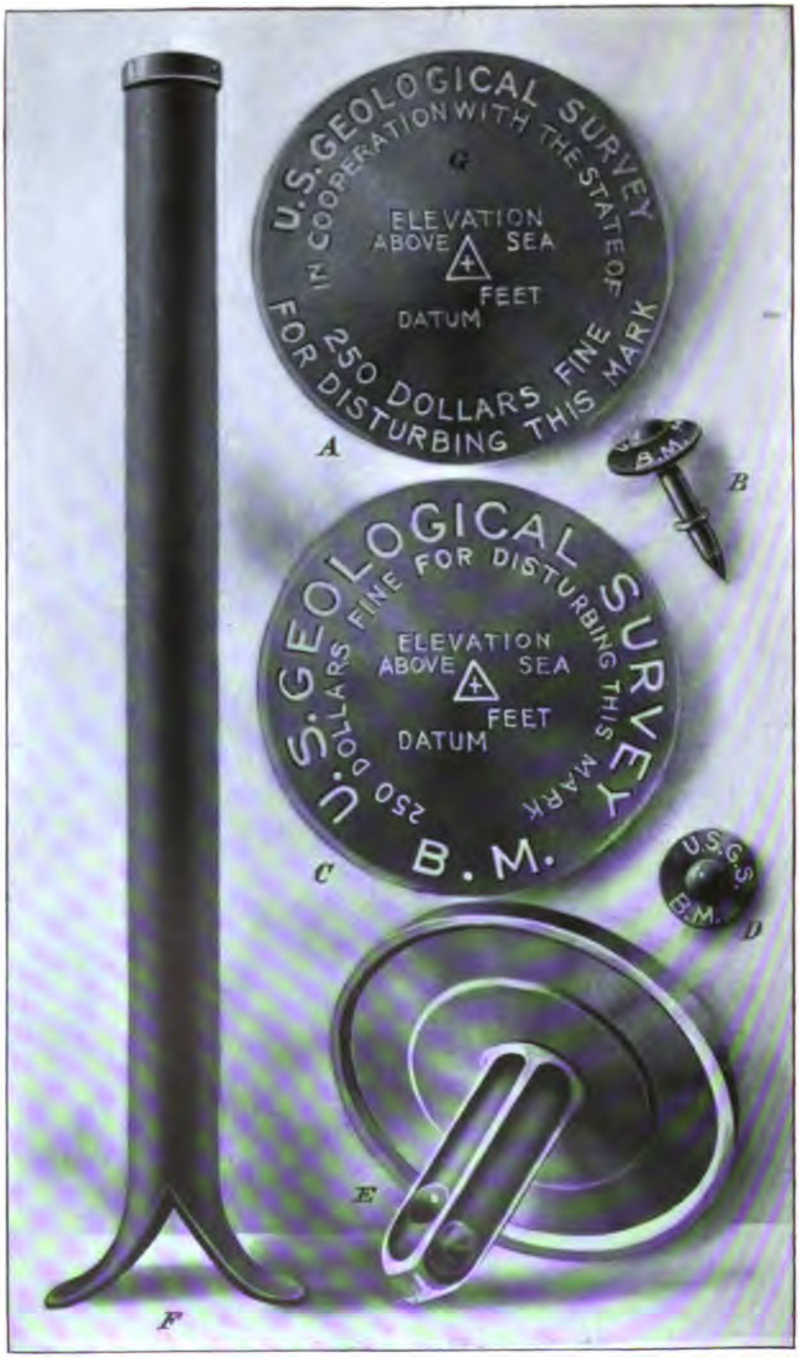

GEOLOGICAL SURVEY BENCH MARKS.

A, Tablet used in cooperating States. The State name is inserted at *G*.
B and *D*, Copper temporary bench mark, consisting of a nail and copper washer.
A, *C*, and *E*, Tablets for stone or concrete structures.
F, Iron post used where there is no rock.

RESULTS OF SPIRIT LEVELING IN NEW YORK, 1906 TO 1911, INCLUSIVE.

R. B. Marshall, Chief Geographer.

INTRODUCTION.

Coöperation.— The State of New York contributed financially to the work during the years 1906 to 1911, inclusive, being represented by the office of the State engineer and surveyor (Henry A. Van Alstyne, 1905–6; Frederick Skene, 1907–8; Frank M. Williams, 1909–10; and J. A. Bensel, 1911).

Previous publication.— The following results of spirit leveling are supplemental to and accord with the elevations contained in Bulletin 281 and are in agreement with the 1903 adjustment of precise leveling. These elevations are likely to be changed but slightly by any future adjustment.

Corrections.— These corrections to Bulletin 281 should be noted:

Page 439: Thurman; 1.25 miles north of station, etc. Bench mark has been reestablished and elevation now is 627.774 feet.

Page 440: Glenfield; railroad station, etc. Tablet has been reset and the elevation now is 777.618 feet.

Lowville station, 1,000 feet south of, etc. An aluminum tablet has been set in the place of the bronze tablet. The elevation is 864.529 feet.

Page 443: Two bench marks, one at Belvidere and the other 0.67 mile east of Belvidere, are in the Angelica quadrangle, not in the Belmont quadrangle as listed.

Wellsville, Union school building, etc. Old bench mark was destroyed by fire. A new aluminum tablet stamped "1516" has been reset in the library. Its elevation is 1,517.514 feet.

Page 444: Canisteo, 2.1 miles east of, etc. Reported destroyed.

Adrian, 3.7 miles east of, etc. Bench mark reported destroyed.

Page 450: Bench mark at South Edmeston, in northeast corner of foundation wall of Free Church, aluminum tablet stamped "1127 N. Y.," elevation 1,127.299 feet, was omitted. This should follow bench mark "South Edmeston, 0.2 mile east of railroad," etc.

South Edmeston, 0.2 mile east of railroad, etc., and New Berlin, York, Ontario & Western Ry. bridge 52, etc. Both bench marks destroyed.

NOTE.— Page numbers have been changed to fit the paging of the reprint in the State Engineer's annual report for 1905.

Page 450: Insert after bench mark at New Berlin, the following description and elevation: " New Berlin, top of west end of south abutment of New York, Ontario & Western Ry. bridge, in concrete; aluminum tablet, elevation 1,090.108 feet.

Page 453: Guymard, 600 feet north of station, etc. Destroyed in 1906 and the culvert reconstructed.

Page 460: Willets Point, military post grounds, etc. Bench mark reported destroyed. Mineola, in coping west end north, etc. Bench mark reported destroyed.

Page 461: East Northport, 0.2 mile south of station, etc. Permission granted to remove this bench mark to new building.

Page 469: Newport, stone bridge over West Canada Creek, etc. Bench mark reported destroyed.

Newport, water table, northeast corner of Newport Bank Building, elevation 657.59. Should precede bench mark at Newport.

Page 472: Deadmans Gulch, east of mouth, etc. Elevation of this bench mark doubtful.

Page 475: Insert after Nehasane bench mark the following title and description and elevation of bench mark: LITTLE RAPIDS WEST TO SALMON LAKE, THENCE NORTH TO MUD POND (Single spur line by J. W. Hodges in 1900): Mud Pond, just south of Clear Lake, in rock at outlet; bronze tablet stamped "2007," elevation 2,007.321 feet.

Page 478: Sammonsville, station of the Fonda, Johnstown & Gloversville R. R. Elevation is 587.24, instead of 387.24 feet.

Page 482: See correction for page 439.

Page 484: Description of bench mark at West Winfield should be: West Winfield, 134 feet east of station and on line with south end of same, 19 feet north measured at right angles from center line of present main track, in east concrete monument six inches in diameter in center of park at station; bronze tablet stamped "1182 ALBANY 1903 ADJ." The elevation of this mark has not been changed and is 1,182.308 feet.

Page 494: First three bench marks listed under the Margaretville quadrangle are in Phoenicia quadrangle.

Page 500: Insert after bench mark at Rensselaer Falls the following description and elevation: DeKalb Junction, 0.8 mile northeast of; aluminum tablet stamped "462" (set in 1908), elevation 461.976 feet.

Page 504: Glenfield, in foundation wall of, etc. Bench mark reset; elevation is now 777.618 feet.

Page 510: Lebanon, 50 feet north of station, etc. Bench mark has been moved and description and elevation are now as follows: Lebanon, 53 feet west of highway, 128 feet northeast of railroad, in southwest corner of wall of store-dwelling; aluminum tablet stamped "1358," elevation 1,357.949 feet.

NOTE.— Page numbers have been changed to fit the paging of the reprint in the State Engineer's annual report for 1905.

Page 519: Otisco Lake outlet, at west end of State dam, etc. New dam has been built. The elevation of the spillway is 786.6 feet.

Otisco Lake outlet, east wing of State dam, etc. This bench mark is at times inundated. A new bench mark established on the southwest abutment of the new dam about 12 inches from the batter line consists of a 1-inch copper bolt marked " B. M.," the elevation of which is 790.15 feet.

Page 527: Kendaia, 40 feet east of railroad on highway etc. Bench mark reported destroyed.

Page 530: Bench mark elevations appearing under Bath quadrangle have been changed, the latest elevations appearing in this bulletin.

Page 533: South Lima, southwest corner of cold-storage building, etc., should read South Lima near southeast corner, etc.

Wayland in west face of Lackawanna school house, etc. Bench mark has been removed and reset in the sidewalk, the new elevation being 1,361.33 feet.

Page 542: Insert between " Watts Flats, in front of station," etc., and " Brokenstraw, 3.18 miles northwest of," etc., the following: Niobe, north end of backwall of west abutment of Erie Railroad bridge 600 feet west of station; bronze tablet stamped " 1434 DUNKIRK," elevation 1,433.522 feet.

Brokenstraw, 3.18 miles northwest of, etc. Bench mark has been destroyed.

The following quadrangle names which appear in Bulletin 281 should be changed as noted below:

Cameron to Hammondsport, Coventry to Oxford, Dickinson to Nicholville, Gowanda to Cattaraugus, Hancock to Starrucca, Hogansburg to Moira, Holland to Colden, Hornellsville to Hornell, Kildare to Childwold, Lackawaxen to Milford, Mecham Lake to Santa Clara, Narrowsburg to Damascus, Piseco to Piseco Lake, and Shongo to Wellsville.

Personnel.— The field work for 1906 was done under the direction of H. M. Wilson, geographer; for the years 1907 to 1911, inclusive, under Frank Sutton, geographer; and from 1908 to 1911, inclusive, under the general supervision of R. B. Marshall, chief geographer.

Credit is given to the various level men directly in charge under the heading of each list. The office work of computation, adjustment, and preparation of lists was done mainly by S. S. Gannett, geographer, and D. H. Baldwin, topographer, and since 1907 under the general direction of E. M. Douglas, geographer.

Classification.— No precise leveling has been done by the United States Geological Survey in this State since 1902. For primary lines standard Y levels are used; lines are run in circuits or are closed on precise lines, with an allowable closing error in feet represented by 0.05 $\sqrt{D}$, in which D is the length of the circuit in miles, sufficient care being given to the work to maintain this standard. For all levels of this class careful office adjustments are made, the circuit closure errors being distributed over the lines.

Bench marks.— The standard bench marks are of two forms. The first form is a circular bronze or aluminum tablet (*C* and *E*, Pl. I), 3½ inches in diameter and one-fourth inch thick, having a 3-inch stem, which is cemented in a drill hole in solid rock, in the wall of some public building, in a bridge abutment, or in other substantial masonry structure. The second form (*F*, Pl. I), employed where masonry or rock is not accessible, consists of a hollow wrought-iron post 3½ inches in outer diameter and 4 feet in length after being split at the bottom and expanded to 10 inches in order to give a firm bearing on the earth. A bronze or aluminum-bronze cap is riveted over the top of the post, which is set about 3 feet in the ground. A third style of bench mark with abbreviated lettering (*B* and *D*, Pl. I) is used for unimportant points. This consists of a special copper nail 1½ inches in length driven through a copper washer seven-eighths of an inch in diameter.

The tablets, as well as the caps on the iron posts, are appropriately lettered, and for coöperating States the fact of such coöperation is indicated by the addition of the State name (*G*, Pl. I). The numbers stamped on the bench marks described in the following pages represent the elevations to the nearest foot as determined by the levelman. These numbers are stamped with $\frac{3}{16}$-inch steel dies on the tablets or post caps, to the left of the word "feet." The office adjustment of the notes and the reduction to mean sea-level datum may so change some of the figures that the original markings are 1 or 2 feet in error. It is assumed that engineers and others who have occasion to use the bench-mark elevations will apply to the Director of the United States Geological Survey, at Washington, D. C., for the adjusted values, and will use the markings as identification numbers only.

Datum.—All United States Geological Survey elevations are referred to mean sea level, which is the level that the sea would assume if the influence of winds and tides were eliminated. This level is not the elevation determined from the mean of the highest and the lowest tides, nor is it the half sum of the mean of all the high tides and of the mean of all the low tides, which is called half-tide level. *Mean sea level is the average height of the water, all stages of the tide being considered.* It is determined from observations made by means of tidal gages placed at stations where local conditions, such as long, narrow bays, rivers, and like features, will not affect the height of the water. To obtain even approximately correct results these observations must extend over at least one lunar month, and if great accuracy is desired they must extend over several years. At ocean stations half-tide level and mean sea level usually differ but little. It is assumed that there is no difference between the mean sea level as determined from observations in the Atlantic ocean, the Gulf of Mexico, or the Pacific ocean.

The connection with tidal stations for bench marks in certain areas that lie at some distance from the sea coast is still uncertain, and this fact is indicated by the addition of a letter or a word to the right of the word "Datum" on tablets or posts. For such areas corrections of published results will be made from time to time as the precise-level lines of the United States Geological Survey or other Government organizations are extended.

Topographic maps.— Maps of the following quadrangles, wholly or partly in New York, have been published by the United States Geological Survey up to July 1, 1912. They may be obtained, unless otherwise noted, at 5 cents each or $3 a hundred on application to the Director of the Survey, at Washington, D. C.

Albany.[1]
Albany and vicinity.[1] 20 cents.
Albion.
Alexandria Bay.
Amsterdam.
Angelica.[2]
Antwerp.
Apalachin.[3]
Attica.
Auburn.
Ausable.[4]
Babylon.[5]
Baldwinsville.
Batavia.

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[1] Albany and vicinity map includes Albany, Cohoes, Schenectady, and Troy sheets.

[2] Shows wooded areas.

[3] Apalachin, Dryden, Harford, and Owego sheets, on scale of 1:62,500, have been reduced and form Catatonk sheet, on scale of 1:125,000.

[4] Mount Marcy and vicinity map includes Ausable, Elizabethtown, Lake Placid, and Mount Marcy sheets. Mount Marcy and vicinity forestry map uses the same base.

[5] Babylon, Fire Island, Northport, and Setauket sheets, on scale of 1:62,500, have been reduced and form Islip sheet, on scale of 1:125,000.

Bath.
Berlin (N. Y.-Mass.-Vt.).[1]
Berne.
Big Moose.
Binghamton.
Blue Mountain.
Bolton.
Boonville.
Brier Hill.
Broadalbin.
Brockport.
Brooklyn.[2]
Buffalo.[3]
Caledonia.
Cambridge (N. Y.-Vt.).[4]
Canada Lake. Name changed—see West Canada Lakes.
Canajoharie.
Canandaigua.
Cape Vincent.
Carmel (N. Y.-Conn.).
Carthage.
Castleton (Vt.-N. Y.).
Catatonk.[5]
Catskill.
Cazenovia.
Chautauqua.
Cherry Creek.
Chittenango.
Clayton.
Clove (N. Y.-Conn.).
Clyde.
Cylmer.
Cohoes.[6]
Cooperstown.
Copake (N. Y.-Mass.).
Cornwall (Conn.-N. Y.).[7]
Cortland.
Coxsackie.
Depew.
Dryden.[5]
Dunkirk.
Durham.
Easthampton.
Eden.
Elizabethtown.[9]
Ellenville.
Elmira (N. Y.-Pa.).[10]
Fire Island.[8]
Fonda.
Fort Ann (N. Y.-Vt.).[4]
Fulton.[11]
Gaines (Pa.-N. Y.).
Gardiners Island.
Geneva.
Genoa.
Gilboa.
Glens Falls.
Gloversville.
Goshen (N. Y.-N. J.).
Greene.
Greenwood Lake (N. J.-N. Y.).
Grindstone.
Hamlin.
Hammondsport.
Harford.[5]
Harlem (N. Y.-N. J.).[2]
Hempstead.[2]
Highmarket.
Hobart.
Honeoye.
Hoosick (N. Y.-Vt.).[1]

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[1] Berlin and Hoosick sheets, on scale of 1:62,500, have been reduced and form parts of Taconic sheet, on scale of 1:125,000.

[2] New York City and vicinity map includes Brooklyn, Harlem, Paterson, Staten Island, and parts of Hempstead, Oyster Bay, and Sandy Hook sheets.

[3] Niagara River and vicinity map includes parts of all sheets bordering on Niagara River.

[4] Cambridge, Fort Ann, and Pawlet sheets, on scale of 1:62,500, have been reduced and form parts of Mettawee sheet, on scale of 1:125,000.

[5] Apalachin, Dryden, Harford, and Owego sheets, on scale of 1:62,500, have been reduced and form Catatonk sheet, on scale of 1:125,000.

[6] Albany and vicinity map includes Albany, Cohoes, Schenectady, and Troy sheets.

[7] Cornwall sheet, on scale of 1:62,500, has been reduced and forms part of Litchfield sheet on scale of 1:125,000.

[8] Babylon, Fire Island, Northport, and Setauket sheets, on scale of 1:62,500, have been reduced and form Islip sheet, on scale of 1:125,000.

[9] Mount Marcy and vicinity map includes Ausable, Elizabethtown, Lake Placid, and Mount Marcy sheets. Mount Marcy and vicinity forestry map uses the same base.

[10] Elmira, Ithaca, Watkins, and Waverly sheets, on scale of 1:62,500, have been reduced and form Watkins Glen sheet, on scale of 1:125,000.

[11] Oswego special sheet includes parts of Oswego and Fulton sheets.

Housatonic (Mass.-N. Y.-Conn.).[1]
Indian Lake.
Islip.[2]
Ithaca.[3]
Jamestown.
Kaaterskill.
Kasoag.[4]
Kinderhook.
Lake Placid.[5]
Lake Pleasant.
Lassellsville.
Litchfield (Conn.-N. Y.).[6]
Little Falls.
Lockport.[7]
Long Lake.
Loon Lake.
Luzerne.
Macedon.
Margaretville.
Massena.
Medina.
Mettawee (N. Y.-Vt.).[8]
Mexico.
Millbrook (N. Y.-Conn.).
Montauk.
Monticello.
Mooers.
Moravia.
Moriches.
Morrisville.
Mount Marcy.[5]
***Mount Marcy and vicinity (20 cents).[5]**
***Mount Marcy and vicinity forestry map (20 cents).[5]**
Naples.
Navesink (N. J.-N. Y.).[9]
Neversink.
New Brunswick (N. J.-N. Y.).[9]
Newburg.
Newcomb.
New London (Conn.-N. Y.).
New York City and vicinity (N. Y.-N. J.) (25 cents).[10]
Niagara.
Niagara Falls.[7] [11]
***Niagara Falls and vicinity (10 cents).[11]**
Niagara River and vicinity (10 cents).[12]
Nineveh.
North Creek.
Northport.[2]
Norwalk (Conn.-N. Y.).
Norwich.
Nunda.
Oak Orchard.
Ogdensburg.
Olcott [7]
Old Forge.
Olean.
Oneida.
Ontario Beach.[13]
Oriskany.
Orwell.
Oswego.[14]
Oswego special.[14]

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* Out of print.

[1] Pittsfield and Sheffield sheets, on scale of 1:62,500, have been reduced and form parts of Housatonic sheet, on scale 1:125,000.

[2] Babylon, Fire Island, Northport, and Setauket sheets on scale of 1:62,500, have been reduced and form Islip sheet, on scale of 1:125,000.

[3] Elmira, Ithaca, Watkins, and Waverly sheets, on scale of 1:62,500, have been reduced and form Watkins Glen sheet, on scale of 1:125,000.

[4] Shows wooded areas.

[5] Mount Marcy and vicinity map includes Ausable, Elisabethtown, Lake Placid, and Mount Marcy sheets. Mount Marcy and vicinity forestry map uses the same base.

[6] Cornwall sheet, on scale of 1:62,500, has been reduced and forms part of Litchfield sheet, on scale of 1:125,000.

[7] Lockport, Niagara Falls, Olcott, Tonawanda, and Wilson sheets, on scale of 1:62,500, have been reduced and form parts of Niagara sheet, on scale of 1:125,000.

[8] Cambridge, Fort Ann, and Pawlet sheets, on scale of 1:62,500, have been reduced and form parts of Mettawee sheet, on scale of 1:125,000.

[9] New Brunswick and Sandy Hook sheets, on scale of 1:62,500, have been reduced and form parts of Navesink sheet, on scale of 1:125,000.

[10] New York City and vicinity map includes Brooklyn, Harlem, Paterson, Staten Island, and parts of Hempstead, Oyster Bay, and Sandy Hook sheets.

[11] Niagara Falls and vicinity map includes Niagara Falls, Tonawanda, and Wilson sheets.

[12] Niagara River and vicinity map includes part of all sheets bordering on Niagara River.

[13] Rochester special sheet includes parts of Rochester and Ontario Beach sheets.

[14] Oswego special sheet includes parts of Oswego and Fulton sheets.

Ovid.
Owego.[1]
Oxford.
Oyster Bay (N. Y.-Conn.).[2]
Palmyra.
Paradox Lake.
Passaic (N. J.-N. Y.).[3]
Paterson (N. J.-N. Y.).[2] [3]
Pawlet (Vt.-N. Y.).[4]
Penn Yan.
Phelps.
Phoenicia.
Piseco Lake.
Pitcher.
Pittsfield (Mass.-N. Y.).[5]
Plainfield (N. J.-N. Y.).
Plattsburg (N. Y.-Vt.).
Portage.
Port Henry (N. Y.-Vt.).
Port Jervis (N. Y.-N. J.-Pa.).
Port Leyden.
Potsdam.
Poughkeepsie.
Pulaski.
Pultneyville.
Ramapo (N. Y.-N. J.).
Raquette Lake.
Red Mills.
Remsen.
Rhinebeck.
Richfield Springs.
Richmondville.
Ridgeway.
Riverhead.
Rochester.[6]
Rochester special.[6]
Rosendale.[8]
Rouse Point (N. Y.-Vt.).
Sacketts Harbor.
Sag Harbor.
St. Regis.
Salamanca.
Sandy Hook (N. J.-N. Y.).[2] [7]
Sangerfield.[8]
Santanoni.
Saranac.
Saratoga.
Schenectady.[9]
Schoharie.
Schroon Lake.
Schunemunk.
Schuylerville.
Setauket.[10]
Sheffield (Mass.-Conn.-N. Y.).[11]
Shelter Island.
Silver Creek.
Skaneateles.
Slide Mountain.
Sodus Bay.
Stamford (Conn.-N. Y.).
Staten Island (N. J.-N. Y.).
Stonington (Conn.-R. I.-N. Y.).
Stony Creek.
Stony Island.
Syracuse.
Taberg.
Taconic (N. Y.-Mass.-Vt.).[12]
Tarrytown (N. Y.-N. J.).

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[1] Apalachin, Dryden, Harford, and Owego sheets, on scale of 1:62,500, **have been reduced and** form Catatonk sheet, on scale of 1:125,000.

[2] New York City and vicinity map includes Brooklyn, Harlem, Paterson, Staten Island, and parts of Hempstead, Oyster Bay, and Sandy Hook sheets.

[3] Paterson and Staten Island sheets, on scale of 1:62,500, have been reduced and form parts of Passaic sheet, on scale of 1:125,000.

[4] Cambridge, Fort Ann, and Pawlet sheets, on scale of 1:62,500, have been reduced and form parts of Mettawee sheet, on scale of 1:125,000.

[5] Pittsfield and Sheffield sheets, on scale of 1:62,500, have been reduced and form parts of Housatonic sheet, on scale of 1:125,000.

[6] Rochester special sheet includes parts of Rochester and Ontario Beach sheets.

[7] New Brunswick and Sandy Hook sheets, on scale of 1:62,500, have been reduced and form parts of Navesink sheet, on scale of 1:125,000.

[8] Shows wooded areas.

[9] Albany and vicinity map includes Albany, Cohoes, Schenectady, and Troy sheets.

[10] Babylon, Fire Island, Northport, and Setauket sheets, on scale of 1:62,500, have been reduced and form Islip sheet, on scale of 1:125,000.

[11] Pittsfield and Sheffield sheets, on scale of 1:62,500, have been reduced and form parts of Housatonic sheet, on scale of 1:125,000.

[12] Berlin and Hoosick sheets, on scale of 1:62,500, have been reduced and form parts of Taconic sheet, on scale of 1:125,000.

Theresa.
Thirteenth Lake.
Ticonderoga (N. Y.—Vt.).
Tonawanda.[1] [2] [3]
Troy.[4]
Tully.
Tupper Lake.
Utica.
Waddington.
Warren (Pa.-N. Y.).
Watertown.
Watkins.[5]
Watkins Glen.[5]
Waverly.[5]
Wayland.
Weedsport.
West Canada Lakes.
Westfield.
West Point.
Whitehall (N. Y.-Vt.).
Willsboro (N. Y.-Vt.).
Wilmurt.
Wilson.[1] [2]
Winfield.

PRIMARY LEVELING.

Dannemora, Loon Lake, Lyon Mountain, and Santa Clara quadrangles.

CLINTON AND FRANKLIN COUNTIES.

Part of the leveling in Lyon Mountain quadrangle and most of the leveling in the Loon Lake quadrangle was done in 1903 by George Seidel; additional leveling was done in the Loon Lake and Santa Clara quadrangles in 1906 by G. M. Dimmick.

The permanent bench marks set in 1903 are marked " FORT COVINGTON 1903 " in addition to figures of elevation; those set in 1906 are stamped "ADJ 1903," in addition to the figures of elevation.

The leveling in the Dannemora quadrangle, with additional leveling in the Lyon Mountain quadrangle, was done in 1911 by J. W. Perkins. This work is somewhat unreliable because two sections in which excessive errors appeared were not re-run.

LOON LAKE QUADRANGLE.

Onchiota north along the New York Central & Hudson River R. R. to Owls Head.

	Feet.
Onchiota 150 feet south of station, east side of track, in large boulder; aluminum tablet stamped " 1710 FORT COVINGTON ".	1,710.514
Lake Kushaqua, 1.6 miles north of, east side of track, at milepost " Herkimer 146;" top of vertical rail in ground (R. R. b. m.)...	1,760.73

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[1] Lockport, Niagara Falls, Olcott, Tonawanda, and Wilson sheets, on scale of 1:62,500, have been reduced and form parts of Niagara sheet, on scale of 1:125,000.

[2] Niagara Falls and vicinity map includes Niagara Falls, Tonawanda, and Wilson sheets.

[3] Niagara River and vicinity map includes parts of all sheets bordering on Niagara River.

[4] Albany and vicinity map includes Albany, Cohoes, Schenectady, and Troy sheets.

[5] Elmira, Ithaca, Watkins, and Waverly sheets, on scale of 1:62,500, have been reduced and form Watkins Glen sheet, on scale of 1:125,000.

	Feet.
Loon Lake, 1.7 miles south of, east side of track, at milepost "Herkimer 147;" top of vertical rail in ground (R. R. b. m.)	1,778.79
Loon Lake, 0.7 mile south of, east side of track, at milepost "Herkimer 148;" top of vertical rail in ground (R. R. b. m.)	1,777.57
Loon Lake, 500 feet south of station, west side of track, in large boulder; aluminum tablet stamped "1749 FORT COVINGTON 1903"	1,749.109
Loon Lake, 1.3 miles north of, east side of track, at milepost "Herkimer 150;" top of vertical rail in ground (R. R. b. m.)	1,687.95
Plumadore, 2.4 miles south of, east side of track, at milepost "Herkimer 151;" top of vertical rail in ground (R. R. b. m.)	1,687.36
Plumadore, 1.5 miles south of, east side of track, at milepost "Herkimer 152;" top of vertical rail in ground (R. R. b. m.)	1,685.30
Plumadore, 2.4 miles north of, east side of track, at milepost "Herkimer 156;" top of vertical rail in ground (R. R. b. m.)	1,513.23
Mountain View, 3.1 miles south of, east side of track, at milepost "Herkimer 157;" top of piece of rail set in ground (R. R. b. m.)	1,509.04
Owls Head, 0.8 mile south of, east side of track, at milepost "Herkimer 162;" top of vertical rail in ground (R. R. b. m.)	1,517.18
Owls Head, railroad crossing; top of rail	1,527.1
Owls Head, southeast pier of water tank; aluminum tablet stamped "1526 FORT COVINGTON 1903"	1,526.020

Loon Lake along public road southeast via Chases to Merrillville.

Loon Lake, Delaware & Hudson Co. R. R. crossing; top of sail	1,731.1
Vermontville, 5.6 miles north of, 4.3 miles south of Chases, at road crossing in large bowlder; aluminum tablet stamped "1776 FORT COVINGTON"	1,776.288

Plumadore along Delaware & Hudson Co. R. R. northwest to Twin Pond (single spur line).

Lower Middle kiln, railroad crossing; top of rail	1,488.4

Owls Head along highway west to Titusville, thence south to Duane.

Walkers Mill, 200 feet east of, east side of road, 75 feet south of bridge, in large boulder; aluminum tablet stamped "1495 FT. COVINGTON 1903"	1,495.081
Duane Center (3.3 miles west of Walkers Mills), foundation wall of Methodist church, south end of east face; bronze tablet stamped "1655 ADJ 1903"	1,655.262

SANTA CLARA QUADRANGLE.

Duane west via Everton to St. Regis Falls.

Duane Center, 3.6 miles west of, in ledge of rock 15 feet south of center of highway and 140 feet west of highway bridge over Deer River; bronze tablet stamped "1449 ADJ 1903"	1,448.944
Duane Center, 6.8 miles west of, 800 feet west of creek crossing, 10 feet south of highway; bronze tablet stamped "1423 ADJ 1903"	1,422.967
Everton, 10 miles west of Duane Center, 150 feet north of old dam, in large outcropping rock, 12 feet west of center of highway; bronze tablet stamped "1424 ADJ 1903"	1,424.076

	Feet.
Everton, 3.2 miles west of, 18 feet south of center of highway, 100 feet west of residence of W. Sampson, in outcropping rock; bronze tablet stamped "1546 ADJ 1903"	1,545.871

LYON MOUNTAIN QUADRANGLE.

At Twin Pond.

Twin Pond, Delaware & Hudson Co. R. R. station, 100 feet west of, south wing of west abutment of railroad bridge; aluminum tablet stamped "1443 FT. COVINGTON 1903"	1,442.824
Twin Pond, Delaware & Hudson Co. R. R. b. m. "2078+82," cross cut into south corner of parapet abutment	1,442.91

Twin Pond along Delaware & Hudson Co. R. R. northeast to point north of Chazy Lake post office, thence south and east to Russia station.

Twin Pond, 0.8 mile east of, 12 feet south of center of track, in west end of concrete culvert cap; painted square on top, marked "1506"	1,505.97
Standish, 100 feet west of, opposite section house, at southwest corner of railroad water standpipe, on concrete base; marked "1578.3"	1,578.27
Standish, 0.7 mile east of, on south abutment of concrete culvert, 6 feet west of center of track; aluminum tablet stamped "1598"	1,597.880
Lyon Mountain, 185 feet west of, south wing of east abutment of railroad bridge over brook, 11 feet from center of track; aluminum tablet stamped "1753"	1,753.247
Bradley Pond switch, 200 feet east of; top of concrete culvert, marked "1712"	1,711.90
Lyon Mountain, 2.7 miles northeast of, on Delaware & Hudson Co. R. R.; top of concrete culvert, marked "1715.3"	1,715.12
Lyon Mountain, 3 miles northeast of, on southeast end of south abutment of concrete culvert, near junction of railroad sections 7 and 9, 12 feet from center of track; aluminum tablet stamped "1715"	1,714.918
Chazy Lake, 215 feet north of, on east side of concrete railway bridge over brook, 10 feet from center of track; aluminum tablet stamped "1605"	1,604.805
Russia, 3.3 miles west of station, on west end of concrete culvert, 14 feet from center line of location of track; aluminum tablet stamped "1598"	1,597.476
Russia, 110 feet east of station, in top of concrete culvert, 11 feet from center of main track of Delaware & Hudson R. R.; aluminum tablet stamped "1489"	1,488.587

Picketts Corners southwest along highway to point near Merrillville.

Picketts Corners, on rock in yard of F. Bresett, 2 feet from fence line and 40 feet from corner of store; aluminum tablet stamped "801"[1]	799.548
Saranac Hollow, on stone post at fence corner near intersection of Redford road and road to Burnt Hill; drill hole in top of stone marked "778.0"	776.87

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[1] The true elevation of this bench mark may be 1 foot greater.

	Feet.
Moffittsville, west end of wooden bridge over Saranac River; elevation painted on large stone marked " 797.6 " at south side of bridge	796.55
Moffitsville, 0.5 mile west of, in grass plot between two roads from Moffitsville to Redford; drill hole in top of stone marked " 926.9 "	925.80
Moffitsville, 1.7 miles west of, near intersection of Saranac and Redford (old plank) roads with road passing Patrick Moore's house, 5 feet east of center of former road and 100 feet north of center line of latter, in granite stone in wall; aluminum tablet stamped " 1125 "	1,123.592
Redford, 0.5 mile south of, beside Clayburg road, at forks opposite road that crosses Saranac River on iron bridge; point on rock marked " 1097.3 "	1,096.28
Redford, 1.1 miles south of, at road corner, 9 feet from corner of fence; square cut in top of rock marked " 1109.8 "	1,108.76
Clayburg, on northwest corner of north abutment of iron bridge over Saranac River; aluminum tablet stamped " 1119 "	1,117.561
Clayburg, 0.25 mile north of, on Cold Brook road at road corner; square cut on small stone marked " 1132.0 "	1,131.95
Clayburg, 2.3 miles north of, opposite Ans's store; point on rock marked " 1135.9 "	1,134.90
Cold Brook, on south abutment of west wall of iron bridge over north branch of Saranac River where Cold Brook enters; aluminum tablet stamped " 1145 "	1,144.089
Cold Brook, by roadside in front of schoolhouse; point on rock marked " 1167.4 "	1,166.48
Cold Brook, 1 mile west of, 250 feet west of Mrs. P. Hanlon's residence, 12 feet south of road; point on stone marked " 1193.2 "	1,192.23
Cold Brook, 3.2 miles west of, at road corner, in boulder opposite school No. 12; aluminum tablet stamped " 1365 "	1,364.086
Sugar Bush, 1 mile north of post office, at road corner, near fence corner; square cut in top of boulder marked " 1570.8 "	1,569.88
Sugar Bush, 0.8 mile south of, at fork in roads, in rock in grass triangle between Alderbrook road and road to Merrillville; aluminum tablet stamped " 1616 "	1,614.677
Merrillville, 1.4 miles east of guide boards, at road corner; square cut in top of bowlder marked " 1501.2 "	1,500.35
Vermontville, 5.6 miles north of, 4.3 miles south of Chases road crossing, in large bowlder; aluminum tablet stamped " 1776 "	1,776.288

Disco along highways west to Alderbrook.

Disco, 2.1 miles south of post office, at road corner; square cut in top of stone marked " 1191.7 "	1,190.57
Goodriches Mills, between district school No. 8 and road corner, in a stone in field, 200 feet from school and 50 feet from road; aluminum tablet stamped " 1151 "	1,149.801
Goodriches Mills, 1.8 miles west of, in front of house of M. Yelle; point on stone marked " 1220.0 "	1,218.89

	Feet.
Goodriches Mills, 2.7 miles west of, at road corner, in front of residence of M. Tearney; square cut in top of stone marked "1291.8"	1,290.68
Silver Lake, 2.3 miles east of, at road corner, on stone in field near stone wall at north side of road, 100 feet west of road corner; aluminum tablet stamped "1514"	1,513.176
Hawkeye (Silver Lake) in front of hotel near boathouse; point on rock marked "1402.6"	1,401.57
Silver Lake; surface of water, August 21, 1911	1,393.43
Hawkeye, 1.4 miles west of, 150 feet east of road corner on north side of road, in bowlder; aluminum tablet stamped "1542"	1,541.113
Union Falls, on west wing wall of concrete dam, under gate house; square cut in concrete, marked "1398.8"	1,397.70
Alderbrook, 0.2 mile east of post office, in front of church, near cemetery gate, on bowlder; aluminum tablet stamped "1607"	1,606.172
Alderbrook 0.2 mile west of post office, at road corner near yellow schoolhouse; point on stone marked "1534.7"	1,533.61
Alderbrook, 1.2 miles west of, on bowlder at road corner; square cut with drill hole in center, on top of rock marked "1347.5"	1,346.43
Alderbrook, 2.8 miles west of, at road corner; point on bowlder marked "1501.2"	1,500.35

DANNEMORA QUADRANGLE.

Saranac south along highway to Disco.

Saranac, 0.7 mile southeast of, 300 feet east of red schoolhouse, at road corner; point on stone marked "761.3"	760.09
Saranac, 1.9 miles south of, at road corner; square cut in stone marked "974.1"	972.95
Saranac, 2.8 miles south of, at district No. 1 school, in stone 30 feet from school and 20 feet from road; aluminum tablet stamped "1203"	1,202.097
Redford, about 2.5 miles east of, 50 feet north of road corner, on road to Peasleeville and Saranac; drill hole in top of rock marked "1463.0"	1,461.76
Disco, on stone 100 feet west of road corner and opposite butter factory; aluminum tablet stamped "1158"	1,157.086
Disco, in front of red schoolhouse, 1,200 feet north of post office, square cut in top of stone marked "1218.7"	1,217.61
Disco, 1 mile south of post office, at road corner, in rock opposite house; bronze tablet stamped "1132"	1,130.918

Russia station along Delaware & Hudson Co. R. R. northeast to Dannemora, thence southeast to point 3 miles east of Morrisonville, thence along highway south to Lapham, thence along Delaware & Hudson Co. R. R. southwest to Harkness, thence along highway west, north, and west to Redford.

Russia station, 110 feet east of, 11 feet from center of main track, in top of concrete culvert; aluminum tablet stamped "1489"	1,488.587
Dannemora, 2.3 miles west of, 10 feet from center of track, 15 feet from center of highway near crossing, in top of culvert; bronze tablet stamped "1351"	1,350.408
Dannemora, 0.6 miles east of, 150 feet west of railroad milepost marked "P. 19;" top of concrete culvert marked "1279.5"	1,279.01

	Feet.
Dannemora, 1.5 miles east of, on concrete culvert top, 10 feet from center line of location of track; aluminum tablet stamped "1188"	1,187.842
Cadyville, 5.4 miles west of, on top of concrete culvert over brook; bronze tablet stamped "734"	733.815
Morrisonville, 1.5 miles west of, 6 feet north of center of track, on concrete culvert at highway crossing; bronze tablet stamped "593"	592.818
Morrisonville, 0.9 mile east of, on top of concrete cattle pass, 12 feet from center of track; bronze tablet stamped "384"	383.600
Morrisonville, 3.5 miles east of, about midway between West End switch and railroad milepost marked "L.P.76-P.7," on top of concrete culvert; aluminum tablet stamped "294"	293.782
Peru, 4.9 miles north of, where road to Peru crosses road connecting Schuyler Falls and South Plattsburg (Salmon River station), near telephone pole; point on stone marked "284.3"	284.11
Peru, 4 miles north of, at roadside, 730 feet north of road corner, near residence of Charles Wright on bowlder; aluminum tablet stamped "318"	317.644
Peru, 2.1 miles north of, at road crossing about 0.5 mile north of Lapham Mills; square cut on top of rock marked "320.5"	320.31
Peru, 0.9 mile east of, on culvert top on State highway about 200 feet east of residence of Barney Fitzpatrick; aluminum tablet stamped "294"	294.271
Peru, 960 feet north of post office, at road corner, near telephone pole; square cut on top of rock marked "351.9"	351.82
Peru, in front of station; top of north rail of main track, marked "346.2"	346.1
Peru, 1.5 miles south of, 7 feet west of track, one stone abutment of cattle pass; aluminum tablet stamped "378"	378.236
Harkness, at crossing near Harkness station; top of south rail of main track, marked "374.1"	374.1
Harkness, 0.6 mile west of, 10 feet north of Peasleeville road, 130 feet west of road corner, 20 feet west of small culvert, in granite bowlder; aluminum tablet stamped "379"	378.861
Harkness, 1.6 miles west of, at road corner near residence of Warren Kirby, at north fence corner; square cut on stone marked "641.8"	641.84
Harkness, 3.6 miles west of, 12 feet east of Peasleeville road, and 1,200 feet north of residence of Thos. Boyd in bowlder; aluminum tablet stamped "556"	555.845
Harkness, 4.2 miles west of, on road to Peasleeville, at road corner near residence of Lawrence Clair, in grass triangle; square cut in small stone marked "722.0"	722.06
Harkness, 5.2 miles west of, on road to Peasleeville, at road corner; square cut on stone marked "1105.7"	1,105.76
Peasleeville, 4.2 miles south of, at road corner on Harkness road; point on small stone marked "1041.4"	1,041.51

	Feet.
Peasleeville, 3.2 miles south of, on Harkness road, at road corner, 15 feet west of Peasleeville road, opposite road to Peru, in small bowlder; aluminum tablet stamped "949"	949.232
Peasleeville, 2.2 miles south of, at road corner, on Harkness road, opposite telephone pole; point on stone marked "855.4"	855.54
Peasleeville, 1.6 miles east of, on road to Peru, on rock at road corner near Patent school; square cut on top of stone marked "725.5"	725.70
Peasleeville, 1 mile east of, bridge over Salmon River	668.6
Salmon River; surface of water under bridge, September 18, 1911	660.4
Peasleeville, 1 mile east of post office, on road to Peru, at road corner opposite Ricketson's store; square cut on stone marked "691.7"	691.89
Peasleeville, on rock near wall opposite Methodist Church and under elm tree, 11 inches in diameter; aluminum tablet stamped "754"	754.283
Peasleeville, 0.9 mile west of post office, on road to Redford, at road corner; square cut on top of small stone marked "723.8"	723.97

Massena and Potsdam quadrangles.

ST. LAWRENCE COUNTY.

The elevations in the following list are based upon an aluminum tablet in wall of Music Hall at Norwood. The elevation of this bench mark is accepted as 330.017 feet above mean sea level.

The leveling was done in 1906 by G. M. Dimmick.

A check obtained at Winthrop was 1 foot too high; all or part of the elevations may therefore be 1 foot too high.

POTSDAM QUADRANGLE.

Norwood via Potsdam to South Colton.

	Feet.
Norwood, 2.6 miles south of, in brickwork of schoolhouse, north end of west face, 30 inches above ground; bronze tablet stamped "401 ADJ 1903"	401.129
Potsdam, in third step of main entrance of Clarkson school building; aluminum tablet stamped "433 ADJ 1903"	433.250
Potsdam, 3.7 miles south of, in foundation wall of the residence of G. B. Crandall, west end of north face; bronze tablet stamped "544 ADJ 1903"	543.825
Potsdam, 6.5 miles south of, in south end of east abutment of highway bridge over Racquette River; bronze tablet stamped "559 ADJ 1903"	558.654
Colton, in foundation wall of Catholic Church, west end of south face; aluminum tablet stamped "847 ADJ 1903"	846.845
South Colton, in foundation wall of Methodist Church, center of south face; bronze tablet stamped "927 ADJ 1903"	926.925

South Colton via Clear Pond and Parishville to Converse.

	Feet.
South Colton, 3.2 miles northeast of, in large rock 15 feet south of center of highway, 400 feet east of farmhouse, owned by W. P. Lindsay; aluminum tablet stamped "1010 ADJ 1903"	1,009.777
South Colton, 6.5 miles northeast of, 20 feet east of Perkins schoolhouse, District No. 16, in large rock; aluminum tablet stamped "1304 ADJ 1903"	1,304.313
South Colton, 10.1 miles northeast of (Clear Pond), in foundation of stone building, north end of east face; bronze tablet stamped "1314 ADJ 1903"	1,314.220
South Colton, 13.9 miles northeast of, in rock at primary triangulation station Whites Hill (South), 350 feet west of highway; bronze triangulation tablet stamped "1436 ADJ 1903"	1,435.560
South Colton, 14.3 miles northeast of, in rock at primary triangulation station Whites Hill (North), 400 feet west of highway; bronze tablet stamped "1427 ADJ 1903"	1,426.995
Parishville, in foundation wall of Baptist Church, west end of south face; aluminum tablet stamped "903 ADJ 1903"	903.068
Parishville, 3.2 miles northeast of, in brickwork of house owned by Charles Cuttings, west end of north face; bronze tablet stamped "774 ADJ 1903"	773.925

Potsdam east to Converse, thence north to Buckton.

Potsdam, 2.4 miles east of, in brickwork of schoolhouse, center of south face; bronze tablet stamped "469 ADJ 1903"	469.344
Potsdam, 5.7 miles east of, in top of south end of west abutment of highway bridge over St. Regis River; bronze tablet stamped "507 ADJ 1903"	507.135
Potsdam, 8.2 miles east of, in stonework of stone house owned by H. Converse, west end of north face; aluminum tablet stamped "648 ADJ 1903"	648.131
Potsdam, 11.3 miles northeast of, in brickwork of Beechertown schoolhouse, west end of south face, 10 bricks from foundation wall and 16 bricks from southwest corner; bronze tablet stamped "549 ADJ 1903"	548.694
Buckton, in brickwork of M. E. Church, center of west face, 6 bricks above foundation wall; bronze tablet stamped "405 ADJ 1903".	404.971

MASSENA QUADRANGLE.

Buckton north to Winthrop.

Stockholm, 2.7 miles north of Buckton, in brickwork of residence of Andrew Traverse, west end of south face; aluminum tablet stamped "376 ADJ 1903"	376.265

Antwerp, Canton, Hammond, and Ogdensburg quadrangles.

JEFFERSON AND ST. LAWRENCE COUNTIES.

The elevations in the following list are based upon the precise leveling of the U. S. Board of Engineers on Deep Waterways and of the U. S. Geological Survey. For additional elevations in Ogdensburg quadrangle and adjoining quadrangles see Bulletin 281, pages 59 to 63.*

The leveling was done in 1908 by F. B. Northrup.

ANTWERP QUADRANGLE.

Felt's Mills north via Philadelphia to point about 10 miles south of Rossie.

	Feet.
Felt's Mills, bridge over North Branch of Black River, on east end of south abutment (island abutment); bronze tablet stamped "583"	582.456
Felt's Mills, 1.1 miles east of, 24 feet north of center of track; center of painted circle on bowlder marked "644.2"	644.23
Great Bend, 4.0 miles north of, 40 feet west of center of road, 2 feet east of west line fence, 650 feet south of T road leading to Sterlingville; iron post stamped "642"	642.420
Philadelphia, 4.2 miles south of, bridge over Trout Brook, on southwest abutment; chiseled square marked "553.4"	553.56
Philadelphia, 3.4 miles south of, at crossroads known as Stricklands Corners, 12 feet west of center of road, 54 feet south of center of road, 36 feet east of west line fence, in granite outcrop; aluminum tablet stamped "562"	561.670
Philadelphia, town hall, in south end of east face; aluminum tablet stamped "492"	492.235
Philadelphia, 2.4 miles north of, 7 feet west of center of road, 66 feet north of farmhouse of O. N. Riddell, on top of granite outcrop; center of painted circle marked "469.4"	469.66
Philadelphia, 3.3 miles north of, lower end of granite outcrop, at Halls Corners, 48 feet northwest of center of iron bridge over creek, at junction of roads north and northwest; aluminum tablet stamped "435"	434.813
Philadelphia, 5.6 miles north of, 12 feet west of center of road, 10 feet east of west line fence, on granite bowlder; center of painted circle marked "468.9"	469.18
Philadelphia, 6.8 miles north of, on red sandstone ledge 24 feet west of center of road; aluminum tablet stamped "463"	463.588

Great Bend east about 4 miles, thence north to Keenes station.

	Feet.
Great Bend, 0.7 mile east of, 15 feet south of center of road, 12 feet north of south line fence, on sandstone bowlder; center of painted circle marked "667.5"	668.06
Deferiet, 1.8 miles east of Great Bend, in northeast abutment of iron bridge over Black River; aluminum tablet stamped "640"	640.903
Great Bend, 2.3 miles east of, southwest abutment of iron bridge over canal leading to St. Regis Paper Co.'s mill; center of painted circle marked "672.3"	672.84
Great Bend, 3.7 miles east of, 10 feet north of center of road, 15 feet south of north line fence, 0.4 mile west of Utica Division tracks of Rome, Watertown & Ogdensburg R. R., in sandstone outcrop; aluminum tablet stamped "737"	737.710

**See* Report of State Engineer and Surveyor for 1905, pp. 499–508.

	Feet.
Great Bend, 5.3 miles east of, at T road south known as Gate's Corners, 6 feet east of center of road, 6 feet west of east line fence on granite bowlder; center of painted circle marked "691.1"	691.66
Great Bend, 7.2 miles east of, northeast corner of veranda of house of Lotus S. Fargo, known as Fargo's Hotel, in sandstone outcrop; aluminum tablet stamped "762"	762.460
Great Bend, 8.0 miles northeast of, 9 feet east of center of road, 20 feet west of east line fence; center of painted circle on granite bowlder marked "763.6"	764.03
Antwerp, 9.8 miles south of, 36 east of center of road, 375 feet south of farmhouse of L. J. Exford, in granite bowlder; aluminum tablet stamped "695"	695.894
Antwerp, 7.9 miles south of, at northwest corner of intersection of crossroads, at base of maple tree in southeast corner of yard of Mr. Lewis, on granite bowlder; center of painted circle marked "709.5"	709.93
Antwerp, 6.5 miles south of, 12 feet west of center of road, 45 feet east of farmhouse of Charles Arnold, in sandstone outcrop; aluminum tablet stamped "633"	633.432
Antwerp, 4.3 miles south of, 12 feet east of center of road, 4 feet west of east line fence, on granite outcrop; chiseled square marked "622.8"	623.11
Antwerp, 3.2 miles north of, 18 feet east of west line fence, 20 feet west of center of road, 135 feet northeast of farmhouse of J. H. White, in lower end of sandstone ledge; aluminum tablet stamped "618"	618.526
Antwerp, town hall, east end of front stone entrance; aluminum tablet stamped "530"	529.813
Antwerp, in front of station; top of rail	539.4
Antwerp, 2.4 miles north of, 12 feet west of center of track, 24 feet east of west line fence, 120 feet west of farmhouse of Robert Dokin, in granite ledge; aluminum tablet stamped "526"	526.654

HAMMOND QUADRANGLE.

Edwardsville south to Keenes station.

Edwardsville, in foundation wall of Union Church, east end of south face; bronze tablet stamped "295"	295.206
Edwardsville, 1.0 mile south of, lower end of granite outcrop, 4 feet east of center of road, 20 feet west of east line fence; center of painted circle marked "310.5"	310.48
Pope Mills schoolhouse, north end of east face; aluminum tablet stamped "287"	287.434
Pope Mills, 1.2 miles south of, bend in road at top of hill, 9 feet east of center of road, 15 feet west of east line fence, on granite bowlder; center of painted circle marked "316.8"	316.83
Pope Mills, 3.4 miles south of, west end of granite outcrop, 12 feet east of center of road, 63 feet southwest of farmhouse of B. F. Puffer; aluminum tablet stamped "382"	382.103

	Feet.
Pope Mills, 4.8 miles south of, 12 feet west of east line fence, 4 feet east of center of road, on stone east of stone drain; center of painted circle marked "312.6"	312.64
Pope Mills, 6.7 miles south of, at bend in road, 5 feet east of center of road, 12 feet east of west line fence, 793 feet south of T road west, in lower end of granite outcrop; bronze tablet stamped "439"	438.770
Pope Mills, 8.9 miles south of, 18 feet west of center of road, 10 feet east of west line fence, 150 feet northwest of farmhouse of Edwin Wilson; center of painted circle on granite bowlder marked "509.7"	509.70
Elmdale, southwest abutment of iron bridge over Oswegatchie River; bronze tablet stamped "336"	335.596
Elmdale, 2.2 miles south of, 9 feet west of center of road, 3 feet east of west line fence, on granite outcrop; center of painted circle marked "457.6"	457.64
Summerville, 4.3 miles north of, northwest abutment of iron bridge over Oswegatchie River; aluminum tablet stamped "365"	365.412
Summerville, 2.3 miles north of, 12 feet west of center of road, 4 feet east of west line fence, on granite bowlder; center of painted circle marked "461.2"	461.23
Summerville, north end of east face of hotel, stone building; aluminum tablet stamped "460"	459.626
Keenes station, 66 feet south of center of highway, 45 feet east of center of track, 150 feet southwest of Kentfield House hotel, in lower end of granite outcrop; aluminum tablet stamped "465"	465.577
Keenes, in front of station; top of rail	464.8

Point 10 miles south of Rossie north to Oak Point.

Rossie, 8.5 miles south of, at T road west leading through farm of Mr. Egglestone to Muscalonge Lake, 12 feet east of center of road, 10 feet west of east line fence, in granite bowlder; aluminum tablet stamped "393"	393.237
Rossie, 6.2 miles south of, 15 feet east of center of road, 1 foot east of east line fence, in front of farmhouse of C. B. Lynde, on granite rock; center of painted circle marked "427.9"	428.33
Oxbow, 2.2 miles north of, 10 feet east of center of road, 12 feet west of east line fence, in lower end of large granite outcrop; aluminum tablet stamped "409"	408.904
Rossie, 1.9 miles south of, southwest abutment of iron bridge over Indian River; aluminum tablet stamped "315"	314.016
Rossie, southwest abutment of iron bridge over Indian River; bronze tablet stamped "283"	283.583
Hammond, 4.0 miles south of, 12 feet east of center of road, 1 foot west of east line fence, on granite bowlder; center of painted circle marked "292.6"	293.01
Hammond, 3.1 miles south of, at bend in road, 6 feet east of center of road, 8 feet west of east line fence, 438 feet south of farmhouse of Charles Murey; aluminum tablet stamped "360"	360.906

	Feet.
Hammond, 2.1 miles south of, southeast abutment of iron bridge over Black Creek; center of painted circle marked "279.6"	280.06
Hammond, town hall, south side of cement steps at front entrance, 8 inches from ground; bronze tablet stamped "361"	361.296
Hammond, 1.1 miles north of, 12 feet east of center of road, 7 inches west of east line fence, on sandstone ledge; center of painted circle marked "318.2"	318.79
Hammond, 2.5 miles north of, 10 feet west of center of road at T road west, 12 feet east of west line fence, 100 feet south of junction of T road and main road, on sandstone outcrop; center of painted circle marked "287.9"	288.37
Hammond, 3.4 miles north of, 18 feet south of center of road, 30 feet west of general store of S. N. Young, 33 feet southwest of junction of T road north, in granite bowlder; aluminum tablet stamped "374"	374.109
Oak Point village, 0.3 mile south of, on crest of hill, west side of road, 22 meters northwest of intersection of river road and Oak Point road, 39 meters west of permanent bench mark 22, 1.7 meters south of large bowlder marked "U. S. P. B. M. O. P." with arrow pointing to bench mark; same letters cut in bedrock, cemented into a sandstone rock 15 inches below surface of ground; round-headed ¼-inch bolt	338.427

Point 4 miles north of Spragueville west to point 1 mile west of Oxbow.

Oxbow, 2.1 miles east of, at Wegatchie, on T road north, in southwest corner of west guardrail of iron bridge over Oswegatchie River; bolt marked "353.4"	353.79
Oxbow, in northwest corner of park, in cement block; aluminum tablet stamped "351"	351.147
Oxbow, 1.0 mile west of, in center of road, at T road north, 50 feet south of fence corner, on rock; center of painted circle marked "355.5"	355.83

CANTON QUADRANGLE.

De Kalb Junction northeast along Rome, Watertown & Ogdensburg R. R. to Canton, thence north along highway to Madrid.

Canton, 5.5 miles southwest of, 9 feet south of railroad, 6 feet east of west line fence of highway, in granite ledge; chiseled square marked "389.7"	389.82
Canton, 4.0 miles southwest of, 12 feet south of railroad, 21 feet north of south line fence, in granite ledge; aluminum tablet stamped "398"	397.971
Canton, 1.0 mile southwest of, on southwest corner of railroad bridge abutment; chiseled square marked "367.6"	366.55
Canton, town hall, east end of top step of main entrance; aluminum tablet stamped "362"	363.132
Canton, 3.4 miles north of, at T road east, beside old State road, on granite bowlder; chiseled square marked "375"	375.09

	Feet.
Canton, 4.5 miles north of, on old State road, in granite bowlder, 720 feet north of farmhouse of H. E. & H. F. Egglestone, 10 feet west of center of road; aluminum tablet stamped "349"	349.045
Canton, 6.5 miles north of, on Old State road, 15 feet east of center of road, on granite bowlder; chiseled square marked "331.9"	330.93
Madrid, 3.9 miles south of, on old State road, on farm of J. W. Wright, 525 feet northeast of crossroad, 130 feet east of center of road, in granite bowlder; aluminum tablet stamped "315"	314.398
Madrid, 1.9 miles south of, on old State road, 15 feet west of center of road, 17 feet east of west line fence, on stone; chiseled square marked "357.2"	356.25
Madrid, in foundation wall of Methodist Church, center of east face; bronze tablet stamped "320"	319.557

Norwood west along highway to Madrid Springs.

Norwood, in foundation wall of Music Hall, north end of east face, 28 inches above ground; aluminum tablet stamped "330"	330.017
Norwood, 1.2 miles west of, in old stone culvert at public highway crossing, 18 feet from center of track, 24 feet west of center of road, 3 feet west of north-south line fence; chiseled square marked "330.2"	330.38
Norwood, 3.2 miles west of, 18 feet north of south line fence, 28 feet south of center of track, in granite bowlder; aluminum tablet stamped "328"	328.020
Madrid, 2.0 miles east of station, 33 feet northeast of center of track, 15 feet north of center of road, 18 feet south of north line fence on granite bowlder; chiseled square marked "308.6"	309.13

Madrid Springs west along highway to Lisbon.

Madrid, 1.1 miles south of, 0.5 mile east of Madrid station, on north end of east abutment of railroad bridge over Grass River; chisel mark; abutment marked "296.6"	295.629
Madrid, 3.9 miles west of station, 65 feet north of railroad, 21 feet north of north line fence, in granite outcrop; aluminum tablet stamped "323"	322.668
Lisbon, in foundation wall of Methodist Church, center of south face; bronze tablet stamped "357"	357.696

Canton east along highways via Crary Mills to Colton.

Canton, town hall, east end of top step of main entrance; aluminum tablet stamped "362"	363.132
Canton, 2.9 miles southeast of, T road east to Crary's Mills, on bowlder west of junction; paint mark; bowlder marked "377.8"	377.84
Canton, 3.0 miles southeast of, T road east, 600 feet south of bridge over Granite Brook, north abutment, west bridge seat; aluminum tablet stamped "363"	363.898
Crary Mills, west abutment of bridge over Granite Brook, southwest corner of abutment; aluminum tablet stamped "462"	463.238
Crary Mills, 3.1 miles southeast of, southeast abutment of bridge over Leonards Brook; aluminum tablet stamped "597"	597.177

OGDENSBURG QUADRANGLE.

Point 8 Miles northwest of DeKalb Junction northeast 0.8 mile, thence southeast to point 0.8 mile northeast of DeKalb Junction.

	Feet.
De Kalb Junction, 2.2 miles north of, 300 feet northwest of highway crossing, 100 feet north of center of track of Rome, Watertown & Ogdensburg Railroad, 150 feet northeast of residence of Van Hunter, in solid rock; aluminum tablet stamped "393 ALBANY ADJ 1903"	393.221
DeKalb Junction, 0.9 mile northeast of, on public highway, on stone at north end of field gate west of road, 35 feet southwest of mail box post; chisel mark; stone marked "418.1"	418.32
DeKalb Junction, 0.9 mile northeast of, east of public highway crossing, in ledge of rock 45 feet south of railroad, 12 feet east of west line fence; aluminum tablet stamped "462"	461.976

Bench mark near Lisbon.

Lisbon, 2.4 miles east of, on stone at highway crossing, 30 feet north of railroad tracks, 10 feet east of center of highway; center of painted circle marked "349.8"	349.91

Big Moose, Carthage, Lowville, McKeever, Number Four, and Port Leyden quadrangles.

HERKIMER, LEWIS, AND ONEIDA COUNTIES.

The leveling was done in 1910, in the McKeever quadrangle by C. H. Semper, and in the Big Moose, Carthage, Lowville, Number Four, and Port Leyden quadrangles by James Rayburn. In 1911 additional leveling was done in the Lowville and Number Four quadrangles by K. E. Schlachter.

McKEEVER QUADRANGLE.

White Lake Station west and north along highway via Porters Corners and Moose River to McKeever.

	Feet.
White Lake, 50 feet west of railroad, 10 feet north of wagon road, in 5-foot bowlder; copper bolt stamped "1421 A"	1,421.664
White Lake Corners, at northwest corner of crossroads, in outcrop; aluminum tablet stamped "1483"	1,482.859
White Lake Corners, 2.7 miles west of, at forks of road to Round Lake, 75 feet north of fork on Round Lake road, in large bowlder; aluminum tablet stamped "1283"	1,283.258
Geo. Scheehl's place, in front of house at south margin of road; top of large bowlder marked "U.S.B.M. 1379"	1,379.23
John Scheehl's place, 0.4 mile north of, 750 feet south of schoolhouse, 35 feet west of road, in large bowlder in piece of low ground; aluminum tablet stamped "1309"	1,308.882
Junction of road to Boonville and Porters Corners, 200 feet north of Marvin Scoutin's house, 50 feet north of corner, in root of cherry tree; spike marked "U.S.B.M. 1215"	1,214.93

	Feet.
Porters Corners, 500 feet west of, forks of road, 75 feet north of road, in large bowlder in pasture; bronze tablet stamped "Prim. Trav. Sta. 983, 1278"	1,278.122
Porters Corners, 1.2 miles north of, on east side of road, 700 feet south of white house; point on large bowlder marked "U.S.B.M. 1324"	1,323.89
Moose River, 2 miles west of, in yard of Jim McHale's farm, 60 feet north of house, in top of large bowlder; aluminum tablet stamped "1387"	1,386.901
Moose River, 340 feet north of hotel, on west side of road, in top of large granite outcrop; aluminum tablet stamped "1451"	1,451.412
Moose River, 1.1 miles east of, on north margin of road, 200 feet west of summit of hill; top of large bowlder marked "U.S.□B.M. 1597"	1,597.520
McKeever, 0.5 mile west of, at small sand pit, at south side of road; top of bowlder marked "U.S.□B.M. 1495"	1,495.28
McKeever, 600 feet south of station, west of track, in rock cut; copper bolt	1,543.823

Bench mark at Minnehaha.

Minnehaha, 300 feet south of station, north end on east side of Moose River bridge, top of concrete parapet wall; aluminum tablet stamped "1683"	1,682.701

Fulton Chain west along log road and highway to Brantingham.

Fulton Chain, in front of town hall, in concrete sidewalk at southwest corner of building; aluminum tablet stamped "1705"	1,704.784
Fulton Chain, 2.4 miles west of, at side of tote road; top of rock marked "U.S.□B.M. 1901"	1,900.71
Fulton Chain, 2.6 miles west of, near summit of grade, on south side of tote road, in sandstone bowlder; aluminum tablet stamped "2001"	2,000.625
Fulton Chain, 4.8 miles west of, Rossiter Camp, 360 feet west of small creek, at north side of road, in top of large bowlder; chiseled square marked "U.S.B.M. 1703"	1,702.75
Fulton Chain, 5.9 miles west of, 350 feet west of old lumber camp, on west side of tote road going up hill, in bowlder; aluminum tablet stamped "1697"	1,697.386
Fulton Chain, 7.1 miles west of, in front of log cabin at Frank Bladis's camp landing, 8 feet north of road, in top of large bowlder; chiseled square marked "U.S.B.M. 1630"	1,630.13
Big Otter Lake; surface of water (30 inches higher than normal), August 8, 1910	1,585.9
Big Otter Lake, outlet, northeast corner, at junction of tote road to Fulton Chain and road to Brantingham, in bowlder; aluminum tablet stamped "1599"	1,599.125
Big Otter Lake, 1.2 miles west of, south side of road, on top of bowlder chiseled square marked "U.S.B.M. 1574"	1,574.50
Hubbard Camp, 55 feet west of barn, 10 feet south of road, in large granite outcrop; aluminum tablet stamped "1517"	1,517.222

	Feet.
Hubbard Camp, 1 mile west of, at summit of small hill, west margin of road, at top of granite outcrop; chiseled square marked "U.S.B.M. 1524"	1,524.69
Hubbard Camp, 1.7 miles west of, on south margin of road, in top of granite bowlder; chiseled square marked "U.S.B.M. 1490"	1,489.948
Brantingham, 4.8 miles east of, north border of road at base of hill; chiseled square on rock painted "U.S.B.M. 1345"	1,344.62
Brantingham, 4 miles east of, 20 feet west of road, in large bowlder; aluminum tablet stamped "1309"	1,308.878
Brantingham, 3.6 miles northeast of, 30 feet south of road, in root of large birch tree, painted "U.S.B.M. 1288"; spike	1,288.10

PORT LEYDEN QUADRANGLE.

Fulton Chain west along log road and highway to Brantingham.

Brantingham, 0.8 mile north of, 30 feet north of bars to pasture, west side of road, in root of cherry tree; spike marked "U.S.B.M. 1272"	1,271.64
Brantingham, in south face of foundation wall of T. Ness's barn, 250 feet west of four-corners; aluminum tablet stamped "ADJ 1903"	1,259.296

LOWVILLE QUADRANGLE.

Lowville northwest along highway to Beaver Falls.

Lowville, 1,000 feet south of railroad station, west side of north abutment of railroad bridge over stream and highway; aluminum tablet stamped "864"	864.529
Lowville, 3.6 miles east of, in east abutment at south end of railroad bridge over Black River; aluminum tablet stamped "744".	744.005
Black River; surface of water under above bridge, August 19, 1910.	728
New Bremen, in north retaining wall of dam, on east side, at railroad bridge over Crystal Creek; chiseled square painted "T.B.M. 775"	775.10
New Bremen, in north retaining wall, on east side, at railroad bridge over Crystal Creek; aluminum tablet stamped "775"	775.119
New Bremen, 1.1 miles north of, in south abutment at east side of bridge; chiseled square marked "775"	775.34
Beaver Falls, 100 feet west of station, 5 feet north of track, in concrete culvert; aluminum tablet stamped "819"	819.238

Beaver Falls west along highway to Castorland.

Beaver River at Beaver Falls dam; surface of water, August 20, 1910	798
Beaver Falls, 3 miles west of, in concrete walk in front of Tom Tyner's house; aluminum tablet stamped "741"	741.571

Beaver Falls northeast along highway to Belfort, thence south to Crystal Lake, thence southwest to Lowville.

Croghan, 70 feet south of railroad, in north end of concrete step of store of Jos. A. Henry aluminum tablet stamped "841"	(Reset.)
Croghan, 1.9 miles northeast of, T road southeast; chiseled square on rock painted "T.B.M. 880"	880.27

	Feet.
Croghan, 2.8 miles northeast of, 500 feet south of house at west side of road; chiseled square on rock painted "T.B.M. 954"	954.58
Belfort, northeast corner of crossroads, west end of concrete porch step to Belfort Hotel; aluminum tablet stamped "1005"	1,004.681
Belfort, 3.25 miles east of, in large rock at north side of road, 700 feet east of Fred Woolschlager's house, 1,000 feet west of Fred F. Coler's house; aluminum tablet stamped "1241"	1,241.336
Belfort, 6.3 miles south of, 1.5 miles east of Kirschnerville, road intersection at schoolhouse (district No. 13), south side of road, 150 feet west of schoolhouse; chiseled square on rock painted "U.S.B.M. 1163.8"	1,164.06
Kirschnerville, 1.5 miles east of, 6.3 miles south of Belfort road intersection at district No. 13 schoolhouse, south side of road, 150 feet west of schoolhouse; bronze tablet stamped "1164"	1,164.129
Kirschnerville, 0.7 mile east of, 350 feet west of house to north, at north side of road; chiseled square on rock painted "U.S.B.M. 1025"	1,025.69
Kirschnerville, 0.5 mile east of, 540 feet east of Grange Hall, southwest corner of T road south; chiseled square on rock painted "U.S.B.M. 1011.6"	1,011.85
Kirschnerville, 0.5 mile east of, 1.5 miles south of intersection near Grange Hall, at southwest corner of T road west; chiseled square on rock painted "U.S.B.M. 1094.9"	1,095.11
Kirschnerville, 0.5 mile east of, 1.5 miles south of road intersection near Grange Hall, 373 feet north of T road west, about 1,000 feet south of John Schack's house, in bedrock on west side of road; bronze tablet stamped "1093"	1,093.369
Crystal Dale, 2 miles east of, on Lowville-Number Four road, 200 feet west of house of Mrs. Hiram Peak, southeast corner of T road south; chiseled square on bowlder painted "U.S.B.M. 1148.6"	1,148.83
Crystal Dale, 3.3 miles east of, northwest corner of Crystal Lake schoolhouse, in foundation, aluminum tablet stamped "1303"	1,303.274
Crystal Dale, 300 feet east of Stephen Baker's house, at bend to south; spike in root of birch tree painted "U.S.B.M. 1259"	1,259.20
Crystal Dale, near, in southwest corner of crossroads on summit, 200 feet west of big barn; top of iron pipe	1,286.02
Crystal Dale, 1.5 miles south of, on Erie Canal road at T road east, 85 feet north of intersection, 1,000 feet north of house of Horace Shaw, 25 feet east of center of road, in large bowlder; bronze tablet stamped "1143"	1,142.834
Crystal Dale, 1.2 miles south of, at T road west to Petries Corners, on east side of road; chiseled square in rock painted "U.S.B.M. 1191.2"	1,191.51
Petries Corners, 0.4 mile south of, 205 feet west of road intersection, chiseled square in cement floor of bridge over Crystal Creek; floor painted "U.S.B.M. 950.1"	950.42
Petries Corners, 0.4 mile west of, at intersection of Lowville-Number Four road, north side of road; chiseled square on rock painted "U.S.B.M. 941.3"	941.64

	Feet.
Petries Corners, 1.3 miles southwest of, on Lowville-Number Four road, 648 feet west of schoolhouse No. 3, 150 feet east of T road north, in southeast corner of retaining wall of bridge over Hodge Creek; bronze tablet stamped "818"	818.036
Petries Corners, 3 miles southwest of, east end of Bushe's landing, northeast corner of intersection; chiseled square on rock painted "U.S.B.M. 763.5"	763.91
Watson, bridge over Black River, in southwest retaining wall; bronze tablet stamped "744"	744.268
Watson, 1.4 miles north of, at T road west; copper nail in root of tree, painted "U.S.B.M. 767"	767.49

Belfort north along highway to Indian River, thence west to Carthage.

Belfort, 0.4 mile north of, on Belfort-Indian River road, at northeast corner of T road east; spike in root of maple tree painted "U.S.B.M. 1091.1"	1,091.24
Indian River, 50 feet west of St. Anthony's Catholic Church, in large bowlder; bronze tablet stamped "954"	954.423
Indian River, 0.6 mile north of, at Indian River schoolhouse, northwest corner of T road west; chiseled square on rock painted "U.S.B.M. 7"	1,041.94
Indian River, 4.5 miles west of, at T road north, 25 feet west of intersection, at northwest corner; surface of bedrock; bronze tablet stamped "908"	907.869
Indian River, 5.6 miles west of, north side of road, on summit; chiseled square on rock painted "U.S.B.M. 961"	961.65
Indian River, 6.9 miles west of, 0.4 mile west of schoolhouse; chiseled square on rock painted "U.S.B.M. 899"	899.41

Crystal Lake east 1.6 miles along road toward Number Four.

Crystal Lake, 0.8 mile east of, south margin of road, on west bank of small stream; chiseled square on bowlder marked "U.S.B.M. 1279.5"	1,279.75
Crystal Lake, 1.6 miles east of, south margin of road, at brow of steep hill; chiseled square on bowlder marked "U.S.B.M. 1385"	1,384.95

Point 3.6 miles west of Long Pond southwest along road to Belfort.

Long Pond, 3.6 miles west of, T road north at Wm. Tanzer's sugar camp, in root of beech tree at northeast corner; spike marked "U.S.B.M. 1359.6"	1,360.33
Long Pond, 5 miles west of, at Prentiss road southeast, in root of maple tree at southwest corner of intersection; spike marked "U.S.B.M. 1338.7"	1,339.47
Long Pond, 6 miles west of, T road north to Besha Mill, at northwest corner of intersection; chiseled square on rock marked "U.S. B.M. 1132.4"	1,133.186
Long Pond, 6.7 miles west of, 735 feet east of Sunset schoolhouse, in southwest corner of foundation of Douglas Powell's house; aluminum tablet stamped "1209"	1,210.230

	Feet.
Long Pond, 7.3 miles west of, at intersection of Alden Creek road, in root of maple tree at southeast corner; spike marked "U.S.-B.M. 1209.5"	1,210.34

Crystaldale along highway south to Chase Lake, thence east 3 miles.

Crystaldale, 1 mile south of, in bowlder on east side of road; aluminum tablet stamped "1143"	1,142.834
Chase Lake, in carriage step of hotel; bronze tablet stamped "Prim. Trav. Sta. No. 1, 1259"	1,259.308
Chase Lake, 1.25 miles east of, on stone at south side of road; painted circle, marked "1295"	1,295.54

CARTHAGE QUADRANGLE.

Belfort north along highway to Indian River, thence west to Carthage.

Indian River, 8.3 miles west of, on Texas road, 135 feet east of point directly opposite Frank Trainer's house, 20 feet south of center of road, in large flat rock; aluminum tablet stamped "913"	913.619

NUMBER FOUR QUADRANGLE

Crystal Lake east along road to Beaver River.

Crystal Lake, 2.5 miles east of, on Lowville-Number Four road, bridge over Black Creek, west end, north side, in bridge seat; bronze tablet stamped "1319"	1,319.188
Crystal Lake, 3.8 miles east of, 15 feet south of road, 50 feet east of wood road south; chiseled square on bowlder marked "U.S.B.M. 1507.7"	1,507.997
Crystal Lake, 4.9 miles east of, at north margin of road; chiseled square on granite outcrop marked "U.S.B.M. 1594"	1,593.86
Number Four, 0.6 mile west of, north margin of road, wood road to south, house to north; chiseled square on granite outcrop, marked "U.S.B.M. 1605.6"	1,605.84
Number Four, in west corner of south foundation of Henry Turk's barn; aluminum tablet stamped "1583"	1,582.917
Number Four, southwest corner of T road southeast; chiseled square on bowlder, marked "U.S.B.M. 1567.7"	1,566.93
Number Four, 2.5 miles east of, south margin of road; chiseled square on sandstone bowlder, marked "U.S.B.M. 1523"	1,522.99
Number Four, 3 miles east of, 20 feet west of milepost No. 3, north side of road, in large bowlder; aluminum tablet stamped "1618"	1,618.261
Number Four, 3.7 miles east of, T road on trail south, on north side of road; spike in root of beech tree marked "U.S.B.M. 1670.2"	1,670.42
Number Four, 4.9 miles east of, at north margin of road; chiseled square on rock marked "U.S.B.M. 1701"	1,701.55
Number Four, 5.8 miles east of, at south margin of road, on summit at turn; chiseled square on bowlder marked "U.S.B.M. 1708"	1,708.43
Number Four, 6.2 miles east of, 5 feet south of road, 50 feet west of summit, in large bowlder; aluminum tablet stamped "1777"	1,777.293

	Feet.
Number Four, 6.6 miles east of, north margin of road south; chiseled square on granite outcrop, marked " U.S.B.M. 1720.8 ".....	1,721.03
Number Four, 7.5 miles east of, 8 miles west of Burn station, south margin of road; chiseled square on bowlder, marked " U.S.B.M. 1844 "	1,844.36
Stillwater, 7 miles west of Beaver station, 20 feet north of road, 100 feet east of "The Old Homestead," in bowlder; aluminum tablet stamped " 1672 "........	1,672.006

Number Four north to Long Pond, thence west 8.6 miles.

Number Four, north margin of road opposite Fenton house; chiseled square on rock marked " U.S.B.M. 1560 "........	1,560.29
Number Four, 1.5 miles east of, at gate to private property of Seymour Van Santvoord, on north side of road, 10 feet north of gate, in root of hemlock tree; spike marked " U.S.B.M. 1437.3 "	1,437.62
Number Four, 1.6 miles east of, 35 feet north of intersection; top of iron post painted and stamped " 1441 "........	1,441.288
Number Four, 2.3 miles northeast of, 55 feet west of west side of Beaver River, opposite mouth of Alder Creek, chiseled square on rock marked " U.S.B.M. 1429 "........	1,429.50
Number Four, 2.4 miles northeast of, about 1,000 feet south of mouth of Alder Creek, north of river, in root of pine tree; spike marked "U.S.B.M. 1427 "	1,427.70
Number Four, 3.1 miles north of, 200 feet north of old lumber camp, 25 feet north of small stream, in trail; chiseled square on rock marked " U.S.B.M. 1461 "........	1,461.51
Number Four, 3.4 miles north of, 50 feet north of creek at falls, west margin of trail; chiseled square on rock marked " U.S.B.M. 1529 "	1,528.08
Number Four, 4 miles north of, at east side of trail; chiseled square on bowlder marked " U.S.B.M. 1602 "........	1,602.11
Number Four, 4.6 miles north of, by side of Crooked Lake, 5 feet west of trail; spike in root of tree marked " U.S.B.M. 1645 "..	1,645.81
Crooked Lake, in front of Crooked Lake Fish and Game Club camp, in large bowlder; bronze tablet stamped " 1632 "........	1,633.788
Crooked Lake, 0.4 mile north of, at intersection of Alden Creek tote road, in root of beech tree; spike marked " U.S.B.M. 1674.4 "...	1,674.79
Crooked Lake, 1.2 miles north of, on Alden Creek tote road, 5 feet west of road; chiseled square on rock marked " U.S.B.M. 1653 "	1,653.66
Crooked Lake, 3 miles northwest of, on Alden Creek tote road, east margin of road: chiseled square on rock marked " U.S.B.M. 1393 "	1,393.21
Crooked Lake, 4.2 miles northwest of, on Alden Creek tote road, about 1,500 feet south of ford over Fish Creek, at north margin of road, in sandstone bowlder; bronze tablet stamped " 1274 "...	1,274.171
Fish Creek, 1.4 miles north of, south side of small stream, west margin of trail; chiseled square on rock marked "U.S.B.M. 1327"	1,327.96
Fish Creek Camp, 0.5 mile north of, west side of log road, at summit in granite bowlder; bronze tablet stamped " 1359 "....	1,359.695

	Feet.
Fish Creek Camp, 1.1 miles north of, at intersection of log road running from head of Fish Creek Flow to Prentiss road, in root of beech tree; spike marked "U.S.B.M. 1364"	1,364.65
Fish Creek Camp, 1.9 miles north of, intersection of private road; chisel square in rock marked "U.S.B.M. 1358"	1,358.58
Prentiss Hotel, Long Pond, 0.5 mile west of log road to north, 50 feet north of road; spike in root of beech tree; marked "U.S.B.M. 1375"	1,375.72
Long Pond road, 0.3 mile south of intersection of, on log road; chiseled square in rock marked "U.S.B.M. 1388"	1,388.75
Long Pond, 0.8 mile west of, at intersection of log road, and Long Pond road, in root of beech tree; spike marked "U.S.B.M. 1368.9"	1,369.50
Long Pond, 600 feet west of Bald Mountain Hotel, in bedrock on north margin of road; aluminum tablet stamped "1378"	1,379.005
Long Pond, 1.4 miles west of, west end of bridge over Oswegatchie River, south side, in concrete retaining wall; chiseled square marked "U.S.B.M. 1347"	1,347.88
Long Pond, 2.6 miles west of, bridge over Oswegatchie River, east end, south side, bridge seat; bronze tablet stamped "1343"	1,343.337

Point 3 miles east of Chase Lake along Tote roads northeast to Balsam Flats, thence north to Stillwater road.

Chase Lake, 3.5 miles east of, in rock on south side of road; aluminum tablet stamped "1386"	1,385.680
Stony Lake, 40 feet south of hotel, in bedrock; chiseled square painted "T.B.M. 1359"	1,358.94
Stony Lake, 1 mile east of, north side of Fourth Creek tote road, in bowlder; bronze tablet stamped "1471"	1,471.059
Balsam Flats Bridge, 2.4 miles west of, on stone at south margin of Fourth Creek tote road; chiseled square painted "1516"	1,515.92
Balsam Flats Bridge, 1.5 miles west of, on south margin of Fourth Creek tote road, on rock; chiseled square painted "1666"	1,665.98
Balsam Flats, 400 feet west of bridge over Independence River, in stone at east margin of Fourth Creek tote road; aluminum tablet stamped "1592"	1,591.907
Fourth Creek, 1.8 miles south of, north side of tote road to Stony Lake, on bowlder; chiseled square marked "1670"	1,669.47
Fourth Creek, 0.4 mile south of, in bedrock near road; aluminum tablet stamped "1682"	1,682.406
Stillwater road, 5.1 miles south of, on rock at east margin of log road west of old camp of G. H. Gould; chiseled square marked "1718"	1,717.66
Stillwater road, 4.2 miles south of, on rock in roadway; chiseled square marked "T.B.M. 1813"	1,813.15
Stillwater road, 3 miles south of, 60 feet south of Fifth Creek Lake trail, in rock on east side of road; aluminum tablet stamped "1799"	1,798.733
Stillwater road, 2.9 miles south of, at Fifth Creek Lake trail, on rock at east side of road; chiseled square painted "T.B.M. 1797".	1,797.06

	Feet.
Stillwater road, 1.3 miles south of, along tote road, on stone at east margin of road; chiseled square painted "1708"	1,707.80
Number Four, 4.2 miles east of, in northeast corner of concrete bridge over Sunday Creek; bolt painted "U.S.B.M. 1587"	1,587.416

Long Pond east along Tote road to Leon Kelly's camp, near Hog Pond (double spur line).

Long Pond, 600 feet west of Bald Mountain Hotel, in bedrock on north margin of road; aluminum tablet stamped "Prim. Trav. Sta. No. 12, 1378"	1,379.005
Long Pond, 0.2 mile east of hotel; bridge over Oswegatchie River	1,354.9
Oswegatchie River; surface of water under bridge, July 11, 1911	1,348
Long Pond, 1 mile east of, north side of road to Leon Kelly's camp; chiseled square on bedrock, painted "1398"	1,397.88
Long Pond, 1.5 miles east of, bridge over Inlet Creek	1,433.1
Long Pond, 1.5 miles east of, surface of water Inlet Creek, July 11, 1911	1,423
Long Pond, 2.1 miles east of, on south side of road to Leon Kelly's camp; chiseled square on bowlder painted "1439"	1,438.76
Long Pond, 2.5 miles east of, 12 feet south of road; top of Lewis-Herkimer county line iron monument No. 60	1,454.656
Oswegatchie River, bridge over	1,436
Oswegatchie River, surface of water under above bridge, July 11, 1911	1,430
Long Pond, 3.3 miles east of, on road to Hog Pond (Leon Kelly's camp), on north side, in stone 6 feet from road; aluminum tablet stamped "1454"	1,453.897
Long Pond, 4.3 miles east of, in bowlder on north side of road to Kelly's camp; chiseled square painted "1559"	1,559.13
Jakes Pond; surface of water, July 26, 1911	1,634.4
Long Pond, 5.4 miles east of, on stone on west side of road to Leon Kelly's camp; chiseled square painted "1680"	1,680.00
Long Pond, 6 miles east of, on south margin of road to Leon Kelly's camp, in bed rock; aluminum tablet stamped "1678"	1,677.748
Long Pond, 7 miles east of, at forks, in rock on north side of road to Leon Kelly's camp; chiseled square painted "1739"	1,738.99
Leon Kelly's camp, 500 feet south of, on road to Long Pond, in rock on east side of road; aluminum tablet stamped "1839"	1,839.489

Cooperstown, Hartwick, and New Berlin quadrangles.

CHENANGO, MADISON, AND OTSEGO COUNTIES.

The leveling in the New Berlin quadrangle was done by A. F. McNair in 1909, and by K. E. Schlachter, F. M. White, and J. Rayburn in 1910; that in the Hartwick quadrangle in 1904–5 by G. M. Dimmick and in 1908–9 by A. F. McNair; and that in the Cooperstown quadrangle in 1906 by G. M. Dimmick.

HARTWICK QUADRANGLE.

Oaksville along highways south to Laurens, thence west to Morris, thence north to Burlington, and east to starting point.

	Feet.
Wart triangulation station, 5 miles west of Cooperstown, on bare knoll of cultivated land owned by T. T. Thompson, in Otsego Township, in southeast corner of field about 8 feet from fence, in top of 36 by 6 by 6 inch stone post set 28 inches in ground; bronze tablet	1,927.354
Hartwick, crossing of Otsego & Herkimer R. R.; near top of rail	1,481.30
Hartwick, opposite Otsego & Herkimer R. R. station, northwest corner of Burch & Ougur's mill; aluminum tablet stamped "1339"	1,339.051
South Hartwick, 0.6 mile north of post office, in east side of foundation wall of large barn belonging to Frank Ingalsbee, 50 feet west of road; aluminum tablet stamped "1264 N. Y. 1909"	1,264.437
Mount Vision, in southeast corner of foundation wall of Baptist Church; aluminum tablet stamped "1169 N. Y. 1909"	1,168.676
Laurens, in northwest corner of post office foundation wall (building owned by A. S. Grey); aluminum tablet stamped "1117 N. Y. 1909"	1,116.689
Laurens, 100 feet east of Otsego & Herkimer R. R. station; top of rail	1,123.1
Butts Corner, in northwest corner of foundation wall of St. Luke's Episcopal Church; aluminum tablet stamped "1375 N. Y. 1909".	1,375.304
Morris, 2.9 miles east of, in southwest corner of foundation wall of residence of Mrs. George Chase; aluminum tablet stamped "1664 N. Y. 1909"	1,664.323
Morris, in northwest side of main entrance to high school; aluminum tablet stamped "1153 N. Y. 1909"	1,158.072
New Lisbon, in south end of east abutment of highway bridge over Butternut Creek; aluminum tablet stamped "1174 N. Y. 1909"	†1,174.130
Garrattsville, in northwest foundation wall of Methodist Episcopal Church; aluminum tablet stamped "1321 N. Y. 1909"	1,320.882
Garrattsville, 2.4 miles north of, in water table at southeast corner of brick schoolhouse (district No. 12, Burlington); aluminum tablet stamped "1394 N. Y. 1909"	1,394.329
Burlington, in southeast corner of foundation wall of Baptist Church; aluminum tablet stamped "1541 N. Y. 1909"	1,541.798
Burlington, 3.4 miles east of, in southwest corner of foundation wall of schoolhouse; aluminum tablet stamped "1721 N. Y. 1909"	1,720.810

Schuyler Lake southeast along highways to Cooperstown.

Oaksville, in foundation wall of Hotel Ayres, south end of east face; bronze tablet stamped "1278 ADJ 1903"	1,277.753

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† Possibly should be 5 feet greater.

New Berlin east along highways to point 2 miles south of Garrattsville (portion of line).

	Feet.
New Berlin, 6.8 miles east of, in northeast corner of foundation wall of barn belonging to Adrian Knoch; aluminum tablet stamped "1497 N. Y. 1909"	1,498.298

NEW BERLIN QUADRANGLE.

South New Berlin along public road to Norwich.

South New Berlin, near northwest corner of Baptist Church, under front window, north side of entrance; aluminum tablet stamped "1059 ALBANY"	1,059.667
South New Berlin, 0.8 mile west of, in front of residence of Mr. Sage; paint mark on southeast corner of stepping block	1,166.09
South New Berlin, near, 1,500 feet east of D. R. Backus's residence, 48 feet to left of center of road, on limestone bowlder; aluminum tablet stamped "1515"	1,514.776
Norwich, 3 miles east of, 50 feet east of F. Follett's residence, in north side of concrete culvert; aluminum tablet stamped "1495".	1,494.526
Norwich, southeast corner of courthouse on Broad Street, in foundation wall; aluminum tablet stamped "1015 ALBANY 1900".	1,015.216

New Berlin along turnpike to Sherburne.

New Berlin, 4 miles west of, in stepping block in front of residence of E. N. Horton; aluminum tablet stamped "1586"	1,586.098
New Berlin, about 5 miles west of, 225 feet west of schoolhouse, at crossroad; paint mark on rock	1,610.06
Sherburne, 5 miles east of, opposite F. Harps's residence, on north side of road; paint mark on rock	1,706.01
Sherburne, 4 miles east of, 350 west of schoolhouse, south side of road; paint mark on abutment of bridge	1,720.45
Sherburne, 3.5 miles east of, in northeast corner of foundation wall of H. M. Dromgoole's barn; aluminum tablet stamped "1751"	1,751.275
Sherburne, 3.5 miles east of, just east of row of 7 maple trees, on north side of road; paint mark on rock	1,686.75
Sherburne, 3 miles east of, 1,000 feet west of G. Moffatt's house, south side of road; paint mark on rock	1,509.54
Sherburne, 1.5 miles east of, 500 feet west of bridge, north side of road; paint mark on rock	1,279.26

Sherburne northeast and east along public roads via Sweet's, thence south along railroad to South Edmeston.

Sherburne, 100 feet west of station crossing, top of south abutment, on east side of iron highway bridge; chiseled square marked "U.S.G.S. B.M. 1048"	1,048.470
Sherburne, west corner north foundation wall of schoolhouse; aluminum tablet stamped "1071"	1,071.487
Sherburne, corner Classic and Knapp streets, east side of road; copper nail and washer in root of maple tree	1,054.15

	Feet.
Sherburne, 1.9 miles north of, south end of bridge over creek; bolt on rail	1,064.04
Sherburne, 3 miles north of, 1,000 feet east of A. Kehoe's residence, north side of road; paint mark on rock	1,405.80
Sherburne, 3.5 miles northeast of, 100 feet west of vacant house owned by G. Robinson, on north side of road; paint mark on rock.	1,272.00
Sherburne, 3 miles north of, in northwest corner stone of foundation wall of F. C. Poole's residence; aluminum tablet stamped "1158"	1,158.250
Sherburne, 6.3 miles northeast of, 200 feet west of Thompson's house at crossroad running north, on north side of road; paint mark on rock	1,281.14
D. Jenk's residence, 50 feet east of; paint mark on south side of stone culvert	1,329.72
Sherburne, 10.1 miles northeast of, near corner of W. Casey's barn, south side of road; paint mark on rock	1,460.88
Sherburne, 10 miles northeast of, in corner stone in northwest corner of foundation wall of W. Casey's barn; aluminum tablet stamped "1462"	1,461.950
Sweet's, about 8 miles west of station, 300 feet south of O. K. Horton's house, west side of road; paint mark on rock	1,688.27
Sweet's, 7.2 miles west of station, 700 feet west of H. Holt's house, north side of road; paint mark on rock	1,591.92
Sweet's, 7.2 miles west of station, 400 feet west of H. Holt's house, north side of road; paint mark on rock	1,559.77
Sherburne, 10 miles east of, 600 feet north of W. Dale's residence, in top of northwest abutment of highway bridge; aluminum tablet stamped "1435"	1,434.456
Sweet's, 5 miles west of station, 700 feet north of C. Miller's house, south side of road; paint mark on rock	1,356.18
Sweet's, 3.5 miles west of station, 200 feet south of vacant house, east side of road; paint mark on stone culvert	1,509.88
Sweet's, 1.5 miles west of station, 100 feet north of corner of road west, opposite W. Washburn's house, east side of road; paint mark on rock	1,257.88
Sweet's, 0.7 mile west of station, on west side of arch bridge; paint mark on concrete rail	1,156.08
Sweet's, at Unadilla Valley Ry. station; top of east rail	1,124.1
South Edmeston, in northeast corner of foundation wall of Free Church; aluminum tablet stamped "ALBANY 1127–1902"	1,127.299

South Edmeston along Unadilla Valley Ry. to New Berlin.

South Edmeston, station at, road crossing; top of east rail	1,110.76
South Edmeston, 2.9 miles south of, west side of south end of top abutment of bridge over creek; paint mark	1,108.06
New Berlin, in concrete top of west end of south abutment of New York, Ontario & Western Railway bridge No. 52; aluminum tablet	1,090.108

Morris west along highway to South New Berlin.[1]

	Feet.
Bourner's farm, junction of farm driveway and main road; copper nail in root of maple tree	1,343.61
Morris, 0.7 mile west of, opposite Mattison's place; copper nail in root of hemlock tree	1,399.91
Morris, 2.7 miles west of, in corner of driveway to Folts; paint mark on rock	1,578.03
Morris, 4 miles west of, in front of Daniel's house, 6 feet south of tree stump; paint mark on rock	1,414.96
Morris, 4 miles west of, at crossroads, 0.8 mile south of district No. 10 schoolhouse, northeast corner of J. R. Padgett's residence; aluminum tablet stamped "1354"	1,358.768
Morris, 5.3 miles west of, north side of road; paint mark on rock under apple tree	1,712.65
South New Berlin, 3.3 miles east of, 1,000 feet east of schoolhouse, opposite old barn, north side of road; paint mark on rock	1,612.32
South New Berlin, 3.1 miles east of, 324 feet east of road intersection near schoolhouse No. 11, south side of road, in shale outcrop; aluminum tablet stamped "1634"	1,636.945
South New Berlin, 2.9 miles east of, 300 feet west of school, north side of road; paint mark on rock	1,706.85
South New Berlin, 2.2 miles east of, in front of Butler's place, 300 feet from crossroads, north side of road; paint mark on rock	1,608.28
New Berlin, under front window, north side of entrance, near northwest corner of Baptist Church, in third row of brick above water table; aluminum tablet stamped "1059 ALBANY 1901"	1,059.667

New Berlin east along highways to point 2 miles south of Garrattsville (portion of line.)

New Berlin, on top of west end of south abutment of New York, Ontario & Western Ry. bridge, in concrete; aluminum tablet (the old tablet on this bridge was removed)	1,090.108
New Berlin, 1.2 miles east of, on east end of south abutment of highway bridge at three corners; marked "1107"	1,107.89
New Berlin, 3.3 miles east of, in southwest corner of foundation wall of large barn belonging to F. A. Collier; aluminum tablet stamped "1381 N. Y. 1909"	1,382.395

COOPERSTOWN QUADRANGLE.

Schenevus north to Maple Valley.

Schenevus, 2.4 miles north of, schoolhouse No. 9, town of Maryland, in foundation wall, center of east face; aluminum tablet stamped "1303 ADJ 1903"	1,303.435
Schenevus, 5.95 miles north of, in foundation wall of residence of Ray Greene, east end of north face; aluminum tablet stamped "1353"	1,353.435

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[1] The elevations under this head result from an average of two runnings, with the exception of one section where a 1-foot error occurred and the values determined by one line were accepted. The values given are intended to accord with that given in Bulletin 281 for South New Berlin. The elevation for Morris, as determined by this line is 5.075 feet greater than that given under the Hartwick quadrangle, the value being possibly 4 or 5 feet too small.

	Feet.
Westford, 9.20 miles north of Schenevus, in foundation wall of Methodist Church, north end of east face; bronze tablet stamped "1563 ADJ 1903"	1,563.194
Maple Valley, 3.34 miles north of Westford, in foundation wall of residence of William H. Beatley, center of south face; aluminum tablet stamped "1777 ADJ 1903"	1,777.444

Delhi, Ellenville, Livingston Manor, Monticello, and Neversink quadrangles.

ORANGE, SULLIVAN, AND ULSTER COUNTIES.

The elevations in the following list are partly reprinted from Bulletin 281, pages 16, 57, 58, and 59. The republished work in the Ellenville quadrangle was done in 1903 and that in the Monticello quadrangle in 1904 by G. M. Dimmick. The new work in these quadrangles was done in 1907 by C. H. Semper.

DELHI QUADRANGLE.

Colliers south along abandoned railroad to Ulster & Delaware R. R., thence east along railroad and highways via Bloomville to North Kortright.

	Feet.
Colliers, 700 feet east of, bridge 54 across Susquehanna River, in northeast corner of coping stone of east abutment; bronze tablet stamped "1119 A". (Partially destroyed, 1907.)	1,118.493
Cooperstown Junction, junction of track to Cooperstown, top of rail	1,120.5
Cooperstown Junction, 3.9 miles south of, north abutment, east side of railroad culvert, in front of Wallace Quackenbush's farmhouse, in top of second step; bronze tablet stamped "1191 ADJ 1903"	1,190.702
West Davenport, in front of station; top of rail	1,177.4
West Davenport, town pump at 3 corners between stores in top of stone curb of well; bronze tablet stamped "1182 ADJ 1903"	1,181.991
Davenport Center, 0.2 mile west of, east embankment of steel bridge 86, north side, in top of bridge seat; bronze tablet stamped "1213 ADJ 1903"	1,212.880
East Meredith, in front of station; top of rail	1,350.8
East Meredith, waiting room to station, front face of door sill; bronze tablet stamped "1352 ADJ 1903"	1,352.147
East Meredith, 3.4 miles east of, 45 feet west of railroad crossing, 550 feet west of railroad milk station, north side of track, at fence line, in large flat rock; bronze tablet stamped "1610 ADJ 1903"	1,610.659
Kortright, 2.2 miles northeast of, highway culvert on large hill leading to North Kortright, south abutment, west end, in top; aluminum tablet stamped "1821 ADJ 1903"	1,821.923

Kortright south along Ulster & Delaware R. R. to Bloomville, thence southwest along highway to Delhi, thence north to West Davenport.

	Feet.
Kortright, 175 feet north of station, 60 feet east of track, at margin of highway, large sandstone rock 10 by 12 feet, top of; aluminum tablet stamped "1872 ADJ 1903"	1,872.393
Kortright, in front of station; top of rail	1,866.1
Kortright, 2.6 miles southeast of, large concrete cattle pass under track north side of railroad, top of east abutment; aluminum tablet stamped "1650 ADJ 1903"	1,651.012
Bloomville, in front of station; top of rail	1,492.8
Bloomville, A. J. Corbin's residence at east side of house in top of stone wall; aluminum tablet stamped "1455 ADJ 1903"	1,454.995
Bloomville, 3.0 miles west of, on south side of river, 260 feet east of C. H. Hoag's farmhouse, in highway, in top of large rock; aluminum tablet stamped "1148 ADJ 1903"	1,418.105
Bloomville, 5.5 miles west of, directly opposite driveway to Geo. E. Hughes's farmhouse, between road and river, in bedrock; aluminum tablet stamped "1385 ADJ 1903"	1,385.067
Delhi, county courthouse, southwest corner, front face, in water table; aluminum tablet stamped "1370 ADJ 1903"	1,370.459
Delhi, 3.8 miles northwest of, directly opposite Meredith schoolhouse, No. 10, on west side of road, in top of rock 4 x 10 feet; aluminum tablet stamped "1911 ADJ 1903"	1,911.598
Delhi, 5.5 miles northwest of, south side of road, at margin of front yard of L. B. Strong, 40 feet east of house, directly opposite road north, in flagstone; aluminum tablet stamped "1886 ADJ 1903".	1,886.708
Meridale, arch bridge over Ouleout creek, south side of road, in top of flagstone; aluminum tablet stamped "1800 ADJ 1903"	1,800.788
Meridale, 2.8 miles north of, at Houghtaling Hollow, 20 feet south of V. B. Forman's farmhouse on east margin of highway, in bowlder; aluminum tablet stamped "1776 ADJ 1903"	1,776.293

ELLENVILLE QUADRANGLE.

Napanoch south along New York, Ontario & Western Ry. via Summitville to Middletown.

Ellenville, in foundation wall of station, center of east face; aluminum tablet stamped "319 ALBANY 1903"	319.518
Spring Glen, in foundation wall of station, center of west face; bronze tablet stamped "451 ALBANY 1903"	451.661
Summitville, 150 feet north of station, north end of west retaining wall, on top of stone sluiceway; chiseled square	546.44
Wurtsboro (Mamakating station), in foundation wall of station, north end of east face; bronze tablet stamped "723 ALBANY 1903"	722.782
Bloomingburg, 0.6 mile south of, south end of east abutment of railroad bridge; point on top	713.53
Winterton, in front of station; top of east rail	598.7
Fairoaks, in front of station; top of east rail	641.2
Crawford Junction, south end of east retaining wall of small culvert, 60 feet south of station; point on top	591.93

Crawford Junction northeast along Erie R. R. to Pine Bush, thence to Dwaarkill (single spur line).

	Feet.
Circleville, 150 feet south of station, at highway crossing; top of east rail	621.8
Bullville, at highway crossing south of station; top of east rail	508.9
Bullville, in foundation wall of Methodist Church, north end of east face; aluminum tablet stamped "518 ALBANY 1903"	517.840
Thompson Ridge, 60 feet south of station, highway crossing; top of east rail	459.4
Pine Bush, in foundation wall of Presbyterian Church, center of south face; bronze tablet stamped "397 ALBANY 1903"	396.919
Dwaarkill, in foundation wall of residence owned by Mr. Horne, center of north face; bronze tablet stamped "351 ALBANY 1903"	351.684

Ellenville northwest along public highways to Greenfield.

Greenfield, at west end of bridge over Beer Kill Creek, north side, top of abutment; aluminum tablet stamped "869 ADJ 1903"	869.139

Summitville northwest along New York, Ontario & Western Ry. to point 3.8 miles southeast of Mountaindale.

Mountaindale, 3.8 miles southeast of, 250 feet south of milepost "N. Y. 98," at railroad culvert, 15 feet west of track in bottom of creek, in bedrock; aluminum tablet stamped "772 ADJ 1903".	775.186

LIVINGSTON MANOR QUADRANGLE.

Lily Lake south to Parksville.

Debruce, 3.1 miles south of, 1,825 feet south of Lily Lake, 150 feet south of small marsh, 260 feet north of summit, on west margin of road, in rock outcrop; aluminum tablet stamped "2140 ADJ 1903"	2,140.461
Parksville, northwest corner of Methodist Church, front face; bronze tablet stamped "1673 ADJ 1903"	1.673.390
Parksville, in front of station; top of rail	1,685.5

Bench marks at Liberty

Liberty, in front of station; top of rail	1,579.1
Liberty, in south end of front face of concrete retaining wall, in front of station; bronze tablet stamped "1577 ADJ 1903"	1.580.865

NEVERSINK QUADRANGLE.

Greenfield north along public highways to Claryville, thence east to Denning.

Greenfield, 3.3 miles northwest of, on west margin of road at junction with road to east, at farm gate, top of large granite bowlder; aluminum tablet stamped "1149 ADJ 1903"	1,149.699
Greenfield, 6.14 miles northwest of, on road to Grahamville, in front of Vendie Rampe's farmhouse, 30 feet west of driveway, on east margin of road, top of large rock; aluminum tablet stamped "1135 ADJ 1903"	1,135.802
Grahamville, front of Reformed Church, northwest corner, top of stone step; aluminum tablet stamped "942 ADJ 1903"	943.034

	Feet.
Grahamville, 2.5 miles north of, at fork of road to Dewittville, 10 feet west of road, in top of large bowlder; aluminum tablet stamped "2073 ADJ 1903"	2,073.741
Claryville, large stone chimney of destroyed Dewittville tannery, north face; aluminum tablet stamped "1667 ADJ 1903"	1,667.038
Ladleton, 300 feet south of post office, on east side of road, top of highway culvert; aluminum tablet stamped "1814 ADJ 1903"	1,813.937

Claryville west along highways to Debruce, thence south to Lily Lake.

Round Pond, southeast corner of N. Buntion's house, stone wall leading to house, top of corner stone; aluminum tablet stamped "1954 ADJ 1903"	1,953.862
Willowemoc, in front yard of Matthew Decker's place, 45 feet north of house, in top of 10 by 5 foot bowlder; aluminum tablet stamped "1823 ADJ 1903"	1,825.042
Debruce, southwest corner of foundation, front face of schoolhouse; aluminum tablet stamped "1660 ADJ 1903"	1,663.380

Parksville south along New York, Ontario & Western Ry. to Liberty.

Parksville, 3.5 miles southeast of, north end of steel trestle, top of retaining wall between bridges; bronze tablet stamped "1681 ADJ 1903"	1,684.843

Liberty southeast along New York, Ontario & Western Ry. to Luzon.

Ferndale, in front of station; top of rail	1,442.4
Strongtown, in front of station signboard; top of rail	1,450.3
Ferndale, 1.0 mile southeast of, 300 feet north of railroad crossing at milk station, top of concrete wall at side of pond on east side of track; bronze tablet stamped "1442 ADJ 1903"	1,445.761

MONTICELLO QUADRANGLE.

Luzon southeast along New York, Ontario & Western Ry. to point 3.8 miles southeast of Mountaindale.

Luzon, in front of station; top of rail	1,317.3
Luzon, in northeast corner of Prince Bros.' grist mill at Main Street railroad crossing; bronze tablet stamped "1315 ADJ 1903"	1,318.257
Fallsburg, in front of station; top of rail	1,222.9
Fallsburg, in face at south end of concrete retaining wall in front of station; aluminum tablet stamped "1221 ADJ 1903"	1,224.315
Centerville, in front of station; top of rail	1,142.5
Centerville, east wall of J. A. Smith's flour mill, directly opposite station; aluminum tablet stamped "1144 ADJ 1903"	1,146.976
Mountaindale, in front of station; top of rail	1,018.1
Mountaindale, 1,300 feet south of station, in north abutment, east side of overhead bridge; bronze tablet stamped "999 ADJ 1903"	1,002.492

Wurtsboro northwest along highway to Mountaindale.

Wurtsboro, 3.2 miles west of, at southeast corner of Munn's Hotel, 5 feet east of steps, in bowlder; aluminum tablet stamped "1308 ADJ 1903"	1,307.948

	Feet.
Wurtsboro, 5.6 miles northwest of, on Dunntown road, 30 feet south of James Dunn's farmhouse, on west margin of road, in bowlder; bronze tablet stamped "1438 ADJ 1903"	1,437.886

Wurtsboro southwest along New York, Ontario & Western Ry. to West Brookville, thence west along highways to Oakland Valley.

Haven, 510 feet north of crossing at station, top of south abutment, west side of railroad culvert; aluminum tablet stamped "506 ADJ 1903"	505.727
West Brookville, 960 feet north of station, south abutment, west side of railroad bridge, in top of bridge seat; aluminum tablet stamped "501 ADJ 1903"	500.728
West Brookville, in front of station; top of rail	504.8
Oakland Valley, highway bridge over Neversink River, in ledge of rock 35 feet southeast of southeast corner; bronze tablet stamped "686 ALBANY 1903 ADJ"	685.570

Hartwood north along New York, Ontario & Western Ry. to Monticello, thence along highway to Luzon.

Hartwood, in stone residence of Willis Butler, north end of east face; bronze tablet stamped "1275 ALBANY 1903 ADJ"	1,275.457
Hartwood, in front of station; top of rail	1,278.5
St. Joseph, in front of station; top of rail	1,377.7
St. Joseph, in front face of station at entrance to waiting room; aluminum tablet stamped "1381 ADJ 1903"	1,380.838
St. Joseph, 2.3 miles north of, at railroad crossing 35 feet west of track, north margin of road, in top of rock 5 by 5 feet; aluminum tablet stamped "1451 ADJ 1903"	1,450.876
Monticello, in front of station; top of rail	1,503.1
Monticello, at main entrance to high school; aluminum tablet stamped "1524 ADJ 1903"	1,524.274
Monticello, 2.5 miles north of, on main road to Luzon, 65 feet north of cross roads, on west margin of road, in outcrop rock; aluminum tablet stamped "1493 ADJ 1903"	1,493.354

Bath quadrangle.

STEUBEN COUNTY.

The elevations given in Bulletin 281 for this quadrangle have been replaced by later and more accurate data. The following list includes descriptions of all bench marks established with their corrected elevations.

The leveling was done in 1899 by W. F. Hammond, in 1900 by W. E. Green, in 1907 by C. H. Semper, and in 1908 by E. M. Eastwood.

Cohocton southeast along Erie R. R. to Savona.

	Feet.
Cohocton, in foundation wall at southeast corner of Methodist Episcopal Church, on Main Street; aluminum tablet stamped "1321 1908"	1,320.538

	Feet.
Cohocton, doorsill of Erie R. R. station	1,286.5
Wallace, in foundation wall of Methodist Episcopal Church, north side, near west front; aluminum tablet stamped "1239.8 1908".	1,239.448
Avoca, near southwest corner of Methodist Episcopal Church front; bronze tablet stamped "1191"	1,191.111
Avoca, opposite passenger room of station; top of rail, marked "1194"	1,194.3
Kanona, on doorsill of passenger station; sill marked "1152"	1,151.68
Kanona, in northwest corner of steeple foundation of Methodist Episcopal Church on Main Street; aluminum tablet stamped "1143 1908"	1,142.217
Bath, county clerk's office, in water table; bronze tablet stamped "1103 OSWEGO 1899"	1,103.885
Bath, 2.25 miles southeast of, on east end of arch culvert under Delaware, Lackawanna & Western R. R.; chiseled square	1,083.57
Bath, 3.5 miles southeast of, on west end of parapet wall of north abutment; chiseled square	1,075.31
Savona, on west end of south pier of Erie R. R. bridge over Cohocton River; chiseled square	1,052.81
Savona, on top of south end of east abutment of highway bridge over Cohocton River; bronze tablet stamped "1050 OSWEGO 1899"	1,050.708

Kanona northeast along Kanona & Prattsburg Ry. to Beans station.

Wheeler, 2.2 miles south of, in front foundation wall of Jacob Fraley's house; aluminum tablet stamped "1235 1908"	1,234.986
Wheeler, in cellar wall at southeast corner of Frank Aull's house; bronze tablet stamped "1262"	1,262.505
Beans Station, 0.4 mile south of, in foundation wall north side of J. L. Brigg's house; aluminum tablet stamped "1330 1908"	1,329.880

Pleasant Valley southwest along Erie R. R. to Bath.

Pleasant Valley, 0.5 mile west of, on north end of pier of open bridge; chiseled square	820.934
Hermitage, in front of station; top of rail	908
State Hatchery, in foundation at southwest corner of main building; aluminum tablet stamped "1001 1908"	1,001.879

Bath southwest along road to North Cameron (mostly single-spur line).

Bath, 2.4 miles south of, iron highway bridge, south end, east side, top of abutment; aluminum tablet stamped "1618"	1,618.467
Bath, 2,7 miles south of, top of stone step in front of farmhouse belonging to Myron A. Miller; square marked "1648"	1,649.39
Bath, 3.1 miles south of, at crossroads, 30 feet south of road, in stone wall; rock marked "U.S.□B.M. 1,584.6"	1,585.09
Bath, 4.4 miles south of, at 3 corners, road to west. at northwest corner; point on rock marked "U. S.□B.M. 1,652.9"	1,653.38
Bath, 5 miles south of, at 4 corners, northeast corner of top of stone culvert; marked "U. S.□B.M. 1.782.1"	1,782.56

	Feet.
Bath, 6 miles south of, in north wall of P. P. Mason's farmhouse; aluminum tablet stamped "1602 ADJ 1903"	1,602.109

Point 3.7 miles east of Adrain north along highway to Avoca.

Adrian, 3.7 miles east of, in face of rock cliff on east side of Erie R. R. and highway, 400 feet northeast of highway bridge over Canisteo River, 25 feet from east rail; bronze tablet stamped "1080" (Reported destroyed)	1,081.183
Browns crossing, 1 mile north of, on margin of road in canyon; rock marked "U. S. □ B. M. 1,459"	1,458.69
Browns crossing, 4.1 miles north of, Buch settlement, in southeast corner of front face of Wesley Methodist Church; aluminum tablet stamped "1446 ADJ 1903"	1,445.597
Towlesville, 1.7 miles south of, in northeast corner of foundation of John Cochran's barn; aluminum tablet stamped "1,508 ADJ 1903"	1,508.153
Towlesville, 1.3 miles south of, at 4 corners, at northeast corner; top of large rock marked "U.S. □ B.M. 1,531.2"	1,531.19
Towlesville, front face, southwest corner of lower church; aluminum tablet stamped "1814 ADJ 1903"	1,813.859
Towlesville, 2.9 miles north of, at forks in road, southeast corner of foundation of small iron arch bridge; aluminum tablet stamped "1302 ADJ 1903"	1,302.004
Towlesville, 4.4 miles north of, top of west end of concrete drain under road, 1,200 feet south of large red barn on east side of road, opposite white house; marked "U.S. □ B.M. 1252.9"	1,252.88
Towlesville, 5.3 miles north of, crossroads, at schoolhouse; top of stake at base of telegraph pole, marked "U.S.B.M. 1,186.9"	1,186.87
Avoca, 0.6 mile south of 3 corners at road across river; top of bowlder marked "U.S. □ B.M. 1,180.0"	1,179.96
Avoca, southeast corner of Methodist Episcopal Church; bronze tablet stamped "1,191 DUNKIRK"	1,191.111

APPENDIX A.

ELEVATIONS ADJUSTED BY THE COAST AND GEODETIC SURVEY FROM PRECISE LEVELING.

Albany, Alexandria Bay, Amsterdam, Baldwinsville, Boonville, Brockport, Brooklyn, Brier Hill, Buffalo, Cape Vincent, Canajoharie, Catskill, Cazenovia, Chittenango, Clayton, Clyde, Cohoes, Coxsackie, Fonda, Fort Ann, Glens Falls, Grindstone, Harlem, Little Falls, Lockport, Macedon, Massena, Medina, Mexico, Moira, Niagara Falls, Ogdensburg, Olcott, Oneida, Oriskany, Oswego, Palmyra, Plattsburg, Poughkeepsie, Red Mills, Remsen, Rhinebeck, Rochester, Rouses Point, Schenectady, Schuylerville, Staten Island, Syracuse, Tarrytown, Ticonderoga, Tonawanda, Troy, Utica, Waddington, Weedsport, West Point, Whitehall, and Wilson quadrangles.

CAYUGA, CLINTON, COLUMBIA, DUTCHESS, ERIE, FRANKLIN, HERKIMER, JEFFERSON, KINGS, LEWIS, MADISON, MONROE, MONTGOMERY, NIAGARA, ONEIDA, ONONDAGA, ORLEANS, OSWEGO, PUTNAM, RENSSELAER, SARATOGA, SCHENECTADY, ST. LAWRENCE, WASHINGTON, WAYNE, AND WESTCHESTER COUNTIES.

The following descriptions and elevations are taken from reports of the Coast and Geodetic Survey, and are republished by permission of the Superintendent of that bureau. The bench marks were established from precise levels, by the Coast and Geodetic Survey, by the United States Lake Survey, by the New York State Survey, by the Board on Deep Waterways, and by the Corps of Engineers, United States Army. They were included in the 1903 adjustment by the Coast and Geodetic Survey and were not changed by the 1907 and 1912 adjustments. The elevations are likely to be changed only slightly by any future adjustment.

STATEN ISLAND QUADRANGLE.

Fort Hamilton to Bath Beach.[1]	Feet.
Fort Hamilton, near gate for wagon road entrance opposite the Ocean House, about 1½ feet above ground, 4 inches from high offset of the retaining wall; cross cut in granite stone on northwest corner of wall on its west side (L)	36.365
Locust Grove, on left hand side in going out on the pier, in revertment wall; cross just below corner of a granite stone (Tidal)	9.199
Bath Beach, on north side of second house (chalet style) from corner of Bay Thirteenth Street on Coopsy Avenue, on east side of house, on north side of window; copper bolt in fifth brick above window ledge (K)	27.326

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[1] Information furnished by Coast and Geodetic Survey.

Bench marks at Governors Island.

	Feet.
Governors Island, extreme northeast corner of large stone having a ringbolt in top and forming part of the coping of sea wall in front of Castle William; cross cut in stone (H)	8.018
Governors Island, on south end of doorsill, entrance into Castle William, on left of main entrance; cross cut in sill (I)	8.633

BROOKLYN QUADRANGLE.

Bay Ridge to Atlantic Dock.[1]

Bay Ridge, at southeast corner of Fourth Avenue and Sixty-seventh Street, two blocks below the Brooklyn city line, inside the sidewalk at northwest corner of Lumbey's lot; cross and square on upper surface of a granite post 6 by 6 inches, projecting about 3 inches above ground (No. 25)	87.268
Bay Ridge, northwest corner of blue stone slab forming top of lowest step leading from Mr. Langley's place to the bay shore; cross marks on lowest step (Tidal)	6.384
Bay Ridge, on top of and at north corner of the tunnel of the Manhattan Beach R. R. under Second Avenue and between Sixty-fifth and Sixty-sixth streets, just outside the Brooklyn city limits; cross mark on coping stone	43.635
Brooklyn, southeast corner of St. Michael's school on Fourth Avenue, just north of Forty-third Street; cross cut in northwest corner of large stone doorstep (A)	65.775
Atlantic Dock, on seaward face of one of the stone store buildings on Atlantic Dock, facing Buttermilk Channel, in space between the two iron doors of store No. 22, and directly under number; cross cut on south end of fourth stone above foundation (G)	9.502

Brooklyn to Corlears Hook.

Brooklyn, on east side of Kings County Hall of Records facing Boerum Place. The granite foundation of this building consists of two courses; the lower course projects beyond the upper one about 2 inches, thus forming a ledge which slopes from the inner edge; mark is on top of this ledge about 5½ feet from corner of building (C)	56.016
Brooklyn, Navy Yard, on south front of the Government machine shop, No. 28, close to the gate on Flushing Avenue; square cut in stone sill of double door at south end of building (D)	13.496
Brooklyn, foot of Hudson Avenue, west of Navy Yard, at gas company's warehouse used for storage of coal, on north side of stone building, on east face of fourth buttress from northeast corner; cross cut on fourth course of stone above foundation (F)	10.403
Corlears Hook, southwest corner of Coe's bonded warehouse, corner of Water and East streets, first door from southwest corner and about 5 feet from ground; cross cut in granite door jamb (E)	13.392
Corlears Hook, door of Coe's warehouse nearest to Corlear Street; edge of stone sill. The door jambs are each monoliths and where the foot of the western jamb meets the stone sill is level of the bench (Tidal)	7.674

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[1] Information furnished by Coast and Geodetic Survey.

HARLEM QUADRANGLE.

Hunters Point to New York City.[1]

	Feet.
Hunters Point, East River, in west side of Front Street, at extreme southeast end of the fence that surrounds the triangular space between Long Island News Co.'s office and the Annex pier; bench mark taken on curbing (Tidal)	5.962
Hunters Point, on large brick building known as Miller's Long Island City Hotel, corner of Borden Avenue and Front Street, entrance to building at southeast corner; cross cut in northwest corner of a triangular space before door (B)	7.942
Ravenswood, at entrance to A. Fischer's garden on Webster Avenue; small square cut on the flagstone top of lowest step (No. 7)	9.958
Astoria, on corner of Fulton Street and Perot Avenue, about 2½ feet from the lamppost and 7½ feet from fire plug; triangle cut in top of curbstone (No. 6)	11.908
Astoria Dock, near, triangle cut into wooden stringer forming part of the sea wall or bulkhead; iron nail was driven into each corner of the triangle and letters "U.S." cut on one side (No. 4).	5.903
Pot Cove, triangle cut into stringer above the tide gage of 1886; iron nail driven in each corner of triangle (No. 1)	9.583
Pot Cove, small cross on coping of wall that divides properties of Messrs. Morrison and Whittenmore; iron fence comes to an end at the place selected for the bench (No. 2)	13.738
Polhemus Dock, at interesection of River Road and Wolcott Avenue; triangle cut into top stone of northeast corner of the Polhemus dock (No. 4a)	6.817
New York City, foot of Eighty-fourth Street, on sea wall, extreme southeast end, square cut on upper surface at corner. It was the intention of the River View Park commissioners to put on top of the stone selected for the bench mark a course of dressed granite coping, which may now be in place (No. 5)	7.543
New York City, iron arch leading to the gas company's wharf at foot of Forty-second Street and in line with end of coal shed, on thirty-second brick counting from level of the dock up:	
1886 bench mark is a small cross made on new brick pilaster..	15.068
1885 bench mark established on same wall about 48 meters from mark of 1886 and on side facing the paved roadway from entrance of works to pier; cross on brick wall marked "U. S. C. S."	10.103

Hunters Point to Willets Point.

Borden Avenue Bridge, where Borden Avenue crosses arm of Newtown Creek; triangle cut in extreme southern end of coping of south abutment of wagon bridge (No. 9)	12.963
Flushing, on Lawrence Street, near J. Milnor Peck's lumber yard; small square cut into sandstone sidewalk flag (No. 10)	8.468
College Point, at interesection of Nineteenth Street and Fifth Avenue; small square cut into northeast corner of granite stone covering the catch basin (No. 11)	41.211

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[1] Information furnished by Coast and Geodetic Survey.

	Feet.
College Point, at ferry yard, foot of Third Avenue; horizontal line of a cross cut into a granite stone of the foundation wall of house (Tidal Station No. 68)	9.588
College Point, about 700 feet beyond station of the Long Island R. R., north division, in the direction toward Whitestone; middle of a square cut on southwest corner of top stone of bridge culvert (No. 12)	34.383
Willets Point, immediately over the Coast and Geodetic Survey gage of 1886; square cut on stringer of long dock No. 105)	10.066

New York City datums.[1]

The following table gives corrections to apply in order to reduce to mean sea level the elevations of bench marks which have been used by the various city bureaus and referred to different datums:

	Feet.
U. S. Geological Survey, Coast and Geodetic Survey since 1898, Board of Water Supply (mean sea level)	0.00
Croton Aqueduct	-0.94
Dock department, mean low water at the battery	-2.09
Coast and Geodetic Survey previous to 1898	+0.11
Atlantic Avenue improvements, Long Island R. R.	+1.62
U. S. Navy Yard datum, Brooklyn sewers, Water Supply, Bridge Department	+1.72
Long Island Railroad	+2.66
Public works, Manhattan highways and sewers, Bronx highways and sewers (mean high water at East Twenty-sixth Street)	+2.67
Rapid Transit Railroad Commission	+2.72
Queens Borough	+2.75
Brooklyn Highway Bureau	+2.80
Richmond Borough (high water)	+3.15

TARRYTOWN QUADRANGLE.

Dobbs Ferry to Montrose.[2]

Dobbs Ferry, S. Taylor's lumber office, near the wharf; copper bolt leaded horizontally in sixth brick from extreme southeast corner of building (V.)	9.631
Dobbs Ferry, about 150 feet south of railroad station, about 75 feet north of center of highway bridge across the tracks, on retaining wall on east side of track in capstone of lowest "step;" bottom of a square hole cut in stone (T)	13.874
Dobbs Ferry, on west side of stone railroad station, in fourth stone above sill, 10 inches south of the door to baggage room, 5 feet above ground, 4 feet north of southwest corner of building; copper bolt leaded horizontally (U.)	14.887
Dobbs Ferry, 0.2 mile north of railroad station, on east side of track, on a very hard stone projecting from the foundation of main and most southern building of the Manila Anchor Brewing Co.'s plant, on west side of building, 18 feet from north end, 6 inches above ground; bottom of a square hole cut in stone (W.).	9.243

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[1] Extracted from the Proceedings of the Municipal Engineers of the City of New York for 1905.

[2] Information furnished by Coast and Geodetic Survey.

	Feet.
Between Ardsley and Irvington, on west side of south abutment of culvert 54; center of a round-headed iron bolt set vertically into rock (R. R. 36)	6.242
Tarrytown, about 0.5 mile south of, just south of first cut below station, about 100 yards south of center of mound of earth left standing on river side of tracks, 9 feet west of west rail, 3 feet above top of rails, bottom of a square hole cut on a hard rock in place (X.)	11.476
Tarrytown, about 0.5 mile south of, 100 yards north of bench mark X., 198 feet south of center of culvert 63, on east side of track, 6 feet from east rail, and 8 inches below top of rail, about opposite center of mound of earth left standing on west side of tracks; bottom of a square hole cut in a horizontal ledge of very hard stone projecting from the bottom of face of cut (Y.)	8.563
Tarrytown, on an approximate level with the floor of the Tarrytown Tile Works on Main Street, a short distance west of railroad, 3.5 feet east of middle door and 2.8 feet above ground, on top edge of coping stone. An arrowhead on the sloping face of coping stone points to the exact spot where rod was held, and the letters "U.S.C.S.B.M." are cut in the first row of brick above the bench mark (Tidal 1 Tarrytown)	10.735
Tarrytown, on first highway bridge across the tracks north of railroad station, 4 feet above ground, 12 inches from face next the tracks; copper bolt leaded horizontally in south end of east abutment (Z.)	20.503
Tarrytown, 1.8 miles north of, 22 rails north of milepost 27 from New York, in a bed of hard stone 9 feet west of west rail; copper bolt leaded horizontally (A1). Head of bolt was smoothed off with a file and a cross cut in center to mark exact point used	8.593
Tarrytown, about 2 miles north of, on Rockefeller property, 12½ rails south of tower 25; hole drilled in stone surrounded by a triangle (Iq′)	10.592
Scarboro, 41 rails north of station, on first bridge above Scarboro, on center line of south abutment, 2 feet from west end; shallow cross mark in square on stone, lettered "U.S.B.M." (B1)	6.694
Ossining, on a brick building on west side of railroad track, on next block north of station, on top of stone sill of north window on west side; cross lines with ¾-inch square cut in the intersection and lettered "C.S.B.M." (Tidal 2 Ossining)	8.664
Ossining, 1.5 miles north of, on west end of north abutment of bridge 92; highest point in a triangle cut in stone	7.833
Croton, about 0.5 mile north of, on top of a large bed of rock, about 6 feet west of west rail; bottom of a square hole cut on first small rocky point north of coal chutes and water tanks (C1)	8.998
Oscawana, near, 100 feet north of tower 33, about halfway between mileposts 36 and 37 from New York, on east side of track, a little higher than top of rail; top of roundheaded fishplate bolt set vertically in rock (R. R. 67)	10.243
Montrose, about 100 yards south of, on east end of first stone culvert south of station; top of roundheaded fishplate bolt set vertically in rock (R. R. 71)	37.439

WEST POINT QUADRANGLE.

Verplanck to Fishkill.[1]

	Feet.
Verplanck, a short distance west of Buchanan's oilcloth factory, on east side of track, on a stone over gutter; bolt near center of stone (V. O. 12)	29.833
Peekskill, 20.7 rails south of station, 5 feet above ground; brass bolt on a rock on east side of a cut, with letters U.S. cut in rock beneath it (Im')	14.143
Peekskill, on stone sill of door to ladies' waiting room, cross cut on southwest corner of sill (V. O. Peekskill)	10.541
Peekskill, about 0.5 mile northwest of, on abutment at southwest corner of bridge over Peekskill Creek, near center of a large stone (V. O. 11)	6.790
Peekskill, north of, 200 feet north of tower 39, 6 feet west of west rail; top of a roundheaded fishplate bolt set vertically in rock in place (R. R. 81)	9.630
Highlands, 1.5 miles south of, on a small culvert; cross cut on northwest corner of west wall (R. R. 84)	7.871
Highlands, about 0.5 mile south of, 45 feet west of center of a small stream, just north of small rock cut, 35 paces east of east rail; bottom of a square hole cut on a large flat rock in situ nearly level with the ground (D1)	7.876
Garrison, about 1 mile north of, in a cut on east side of track; top of a roundheaded fishplate bolt set vertically in rock (R. R. 97)	10.663
Garrison, 680 feet south of mouth of tunnel; top of a roundheaded fishplate bolt set vertically in rock (R. R. 99)	20.636
Cold Spring, near a standpipe, 5 rails north of station, just at south end of a rock cut; top of a roundheaded fishplate bolt set vertically in rock (V. O. 9)	14.035
Cold Spring, about 100 feet west of station, at northern terminus of first north-south street west of station, about in line with center of street, 4 feet above its general level; bottom of a square hole cut in ledge of rock (E. 1)	7.680
Fishkill, near, 40½ rails south of station, at end of a cut on west side of track; step cut in sloping rock (Ik')	11.140

POUGHKEEPSIE QUADRANGLE.

Fishkill to point near Poughkeepsie.[1]

Fishkill, near northern end of first rock cut north of station, 310 feet south of bridge 162, on east side of track; cross on end of an iron rod set vertically in rock (R. R. 118)	8.252
Chelsea, 1.5 miles north of, 10 rails south of tower 53, 9 paces (about 27 feet) east of east rail, bottom of a square hole cut on top of northwestern one of four stone piers about 3 feet high (F1)	5.311
New Hamburg, 19⅓ rails south of a stream crossing track, at west edge of a gutter; hole cut in an irregular-shaped rock surrounded by a triangle (Ii')	14.550

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[1] Information furnished by Coast and Geodetic Survey.

	Feet.
Camelot, on north side of a low rocky point of land, 6 feet from river bank, 4 feet above high water, about 6 feet west of a bunch of cedar trees, about 60 feet west of west rail, 12 feet north of the prolongation of north wall of railroad station; bottom of a square hole cut in rock (G1)	5.787
Poughkeepsie, about 1.2 miles south of railroad station, east of wire fence; bottom of a square hole cut in top of a large flat rock 1 foot high (H1)	31.683
Poughkeepsie, about 2 miles north of, near State Hospital pumping station, beside the path from railroad, 8 feet from track, 16 feet from southeast corner of coal shed; hole cut on irregular rock, surrounded by triangle (If′)	20.300

RHINEBECK QUADRANGLE.

Hyde Park to Barrytown.

Hyde Park, 2 miles south of, about center of rock cut, on west side of track, about 8 feet from west rail; iron fishplate bolt set vertically in stone (R. R. 77½)	9.816
Hyde Park, about 1.5 miles south of, on south abutment of bridge 220; roundheaded fishplate bolt set vertically in northeast corner of east end (Ie′)	6.773
Hyde Park, about 1 mile south of, 625 feet north of bridge 222, 6 feet east of east rail; iron fishplate bolt set vertically in top of a rock 2 feet high (R. R. 159)	8.410
Hyde Park, just north of, 210 feet north of bridge 223; roundheaded fishplate bolt set vertically in a flat rock in gutter on east side of track (R. R. 161)	7.463
Hyde Park, about 1.2 miles north of; roundheaded fishplate bolt set vertically in middle of east wall of culvert 226 (R. R. 163)	6.474
Staatsburg, first cut south of, on east side of track, just east of gutter; roundheaded fishplate bolt set vertically in rock about 2 feet high (R. R. de Witt)	24.078
Rhinecliff, about 1 mile south of, on north trestle bed of abutment to bridge 249; roundheaded fishplate bolt set vertically in southeast corner of east end (Iz)	3.818
Rhinecliff, at rear of the southeast end of station; roundheaded fishplate bolt set vertically in rock (Iyyy)	13.011
Rhinecliff, rear of the northeast corner of station, about 5½ feet above ground; bolt leaded into rock and lettered "U S C S 1894" (Iyy)	15.499
Barrytown, about 1.2 miles south of, 30 feet north of culvert 261, outside of gutter; roundheaded fishplate bolt set vertically in shoulder of rock (Iy)	10.276

CATSKILL QUADRANGLE.

Barrytown to Hudson.[1]

Barrytown, 1.8 miles north of, on south abutment of bridge 269, in top of east draw-bed stone, at east end; iron pin filed off a little to give a suitable surface for the rod (Iv)	2.292

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[1] Information furnished by Coast and Geodetic Survey.

	Feet.
Tivoli, 1 mile north of, bottom of a square hole cut in south end of east wall of culvert 279 (It)	7.328
Tivoli, about 1.8 miles north of, near J. H. Livingston's pumping house, on culvert 280; top of roundheaded fishplate bolt set vertically on the south top stone of east covering (Is)	7.747
Germantown, about 2.5 miles south of, on east side of track, just at edge of gutter; top of a roundheaded fishplate bolt set vertically in a rock (Ir)	9.014
Germantown, about 1.8 miles south of, just outside of gutter, on east side of track; top of a roundheaded fishplate bolt set vertically in rock (Iq)	8.794
Germantown, near, on east side of track; top of a roundheaded fishplate bolt set vertically in first rock cut below landing, lettered "B. M." in red (Io)	9.856
Livingston Creek, about 0.8 miles south of, on east end of north abutment of bridge 290; top of a roundheaded fishplate bolt set vertically on southeast top stone (In)	7.959
Linlithgo, about 0.8 mile north of, 13½ rails south of tower 80, near southeast corner of stone foundation supporting an overhead bridge, on west side of track; top of a roundheaded fishplate bolt set vertically in a rock (R. R. 213)	9.141
Catskill, 2½ rails south of station, on east side of road crossing the railroad tracks, directly opposite road opening in east line fence; half-inch hole drilled in a rock embedded in a bank (Im).	14.764

COXSACKIE QUADRANGLE.

Hudson to point near Castleton.[1]

Hudson, about 1 mile south of, 2 or 3 rails south of Hollenbeck's house, on south abutment of bridge 296; top of a roundheaded fishplate bolt set vertically in top of east stone at east end (Ik).	7.751
Hudson, south entrance to public square, near upper end of Warren Street, on top of western granite post about 1 foot square, projecting above sidewalk about 18 inches; top has form of a flat pyramid; 2-inch square cut at center (city engineer's b. m. 14).	151.799
Hudson, at north or main entrance to courthouse grounds, in a triangle formed by the sidewalk and two curved walks leading into the main walk to courthouse entrance, on monument called No. 2, a marble post 6 inches square with cross mark on top, marks center of street approaching courthouse (city engineer's b. m. 29)	95.753
Hudson, on courthouse, east side of the portico of main or north entrance; bottom of a square hole cut in water table (Jl)	101.206
Hudson, under the overhead bridge leading to the docks and Athens ferry, first bridge above Hudson station, in west side of top of stone pier, under second iron column from south; top of a roundheaded fishplate bolt set vertically in first row of columns from east (V. O. 4)	10.686
Stockport, near, on culvert or bridge 304, on east side of abutment (R. R. 223)	8.886

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[1] Coast and Geodetic Survey bench marks.

	Feet.
Stockport, just south of station, on bridge 307, center of a square cut on northwest corner of south abutment (D. W., Stockport 1)	6.732
Coxsackie, about 0.8 mile north of station, in top of east end of culvert 318; top of a roundheaded fishplate bolt set vertically in middle of wall (R. R. 237)	6.778
Stuyvesant, at door to waiting room on west side of station; cross in a circle cut on southwest corner of sill (Ih)	13.332
Stuyvesant, about 1.8 miles north of, on north davit for boat; cross cut on a bolt 3 feet north of northwest corner of lighthouse (D. W., Stuyvesant 3)	9.082
Schodack Landing, 1.8 miles south of, on south abutment of sluice bridge 328; top of a roundheaded fishplate bolt set vertically at at east end on northeast corner of top stone (If)	5.916
Schodack landing, about 1.5 miles south of, 5 rails north of culvert 329, 8 feet east of east rail, on level with top of this rail; bottom of a square hole cut on top of a hard rock projecting from face of cut (Kl)	10.736

Hudson to point near Castleton.[1]

Hudson, at northwest corner of south abutment of New York Central & Hudson River R. R. bridge 298, about 3.200 feet south of station; knob in a square on top of stone (D. W., Hudson 1).	7.246
Hudson, near, at northeast corner of north wing wall of bridge 303, about 5,500 feet north of station; center of a square cut in top stone (D. W., Hudson 3)	8.045
Stockport, near station, 10 feet from east rail, 1,000 feet south of boat landing, on east side of New York Central & Hudson River R. R.; center of a square cut in a large stone (D. W., Stockport 2)	10.389
Stockport, about 4,200 feet north of Stockport Landing, at northwest corner of bridge 311; square cut in top stone (D. W., Stockport 3)	8.468
Coxsackie, near, about 2,800 feet north of station, on southeast wing wall of bridge 318; cross in a circle on stone (D. W., Coxsackie)	6.767
Stuyvesant, about 1,300 feet south of road to lighthouse, between Stuyvesant and Castleton, on southeast corner of stone railroad culvert; center of a square cut in stone (D. W., Stuyvesant 2)..	6.715
Hotaling Island, between Stuyvesant and Castleton, about 2.600 feet south of south end of, on southwest corner of bridge 236, New York Central & Hudson River R. R.; center of a square cut in top stone (D. W., Stuyvesant 4)	8.676
Schodack Landing, 1.5 miles south of, between Stuyvesant and Castleton, opposite New Baltimore lighthouse, 60 feet east of New York Central & Hudson River R. R. track, in line with south side of warehouse at dock for loading brick; center of a square cut on natural ledge (D. W., Stuyvesant 5)	11.051
Castleton, near, about 2,200 feet south of Castleton lighthouse, on east end of culvert 337 of New York Central & Hudson River R. R.; square cut on stone (D. W., Castleton 2)	10.139

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[1] Information furnished by Board on Deep Waterways.

ALBANY QUADRANGLE.

Bench marks at Albany.[1]

	Feet.
Albany, southwest corner of east wall of west lock (lock 1); top of stone at center of cross cut in top of masonry, marked "B.M.U.S." (C. & G. S. 2)	16.824
Albany, on southwest gate of west lock of lock 2; cross in a circle on top of coping	26.205
Albany, north of, east end of south wing wall of Delaware & Hudson Co. R. R. bridge over Erie Canal; square cut on first step of towpath abutment	30.041

Bench marks at Albany.[2]

Albany, west abutment of Island bridge, foot of State Street, in northeast corner of north coping stone; cross cut in iron bolt (N. Y. 1)	12.837
Albany, Government building, at foot of State Street, east end of building on State Street side; cross in circle in lower basement window sill (N. Y. 2)	18.449
Albany, at lower end of pier between locks at lock 1; chiseled cross in circle on shelf (Canal 1)	10.125

Bench marks near Castleton.

Castleton, 2.5 miles south of, near signal tower 93, opposite Mulls lighthouse, at east side of foundation of water tank; cross cut on stone (D. W., Castleton 1)	14.580
Castleton, 500 feet south of railroad station, 20 feet east of east rail, in rear wall of Phibb's Opera House; intersection of two lines cut in end of copper bolt leaded horizontally (C. & G. S. b. m. L1)	18.590
Castleton, at north door on west side of the New York Central & Hudson River R. R. station; cross in a circle cut on southwest corner of stone sill (C. & G. S. 1b)	16.913
Castleton, about 1 mile south of, southwest wing wall of New York Central & Hudson River R. R. bridge 339, opposite lower end of Campbell's Island; cross in a circle cut on stone forming the second step (D. W., Castleton 3)	12.172
Castleton, about 1 mile north of station, opposite lower end of Campbell's Island; square cut in stone at southwest corner of north abutment of bridge 341 of the New York Central & Hudson River R. R. (D. W., Castleton 5)	12.775

TROY QUADRANGLE.

Bench marks near Rensselaer.[1]

Rensselaer, Irwin steam mill and elevator, on side facing river, near river, at foot of and on south side of Second Avenue; center of a ⅝-inch brass bolt leaded horizontally in stone foundation	13.918
Rensselaer, south abutment of railroad bridge over Second Avenue; center of a ⅝-inch brass bolt leaded horizontally in west wing wall, marked "U.S.B.M." over bolt and "B" beneath it	26.162

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[1] Information furnished by U. S. Lake Survey.

[2] Rept. State Engineer and Surveyor for 1901.

	Feet.
Rensselaer, southwest corner of foundation of water tank at south end of viaduct on which Broadway Street crosses the New York Central & Hudson River R. R. tracks; cross cut on top of stone (D. W. b. m., 1898)	21.333
East Albany, upper railroad bridge across Hudson River; point on top of east shoulder of northeast end of southeast pier (C. & G. S. 1)	26.273

Bench marks near Watervliet.

Watervliet, about 1.2 miles north of Delaware & Hudson Co. R. R. bridge over canal; chiseled cross on coping of retaining wall at south end of towpath parapet of culvert (N. Y. 7, 1901)	25.724
Watervliet, north of, east abutment of bridge across canal; cross cut on southwest face of south wing, on third course of stones close to the corner, 3 feet above ground (C. & G. S. 9, 1875)	49.002

Albany to Cohoes.[1]

Albany, near, east of bridge 6; chiseled cross in circle on north end of towpath parapet of culvert (Canal 8, N. Y. 5a)	25.017
Watervliet, northeast corner north wing of towpath abutment of bridge 12; chiseled cross (Canal 14, N. Y. 8)	32.154
Watervliet, lock at "lower side cut," at anchor of northwest gate; chiseled cross in circle on coping (Canal 15, N. Y. 9)	26.166
Watervliet, towpath abutment of old arsenal bridge, at north angle of main wall; chiseled cross on top of lower course (Canal 16, N. Y. 10)	29.042
Watervliet, on Congress Street, near northeast corner of foundation stone, south of main tower; square cut on towpath end of lift bridge (N. Y. 11)	28.377
Troy, on coping of north wall of north lock of "upper side cut;" chiseled cross on northwest corner of stone (Canal 18, N. Y. 13)	26.825
Green Island, on coping of lock 3, between ends of anchor; chiseled square on southwest gate of west lock (Canal 21, N. Y. 14)	37.678
Green Island, near, on coping of lock 4, between ends of anchor; chiseled cross on southwest gate of west lock (Canal 23, N. Y. 15)	48.841
Cohoes, near, on coping of lock 5, between ends of anchor; chiseled square on southwest gate of west lock (Canal 25, N. Y. 16)	59.625

Rensselaer to Cohoes[2]

Bath, near, northeast corner of stone culvert under the New York Central & Hudson River R. R., about 1,000 feet north of Bath Dyke Light; center of a square cut in top stone	20.428
Troy, near, northwest corner of culvert under the New York Central & Hudson River R. R., about 300 feet north of Covills Folly Light; cross cut in top of stone	18.243
West Troy, northeast corner of west abutment of Congress Street bridge; cross cut on second stone of second course, marked "B. M."	21.158

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[1] Rept. State Engineer and Surveyor for 1901.

[2] Information furnished by Board on Deep Waterways.

Rensselaer to Troy.

	Feet.
Rensselaer, about 1 mile south of railroad station, at bridge by which the Albany and Hudson "third rail" electric road crosses the New York Central & Hudson River R. R. tracks, on west corner of pier supporting the southwest end of first bent of iron trestle approaching bridge, about 40 feet east of east rail; bottom of a square hole cut on the bottom stone (C. & G. S. M_1)	26.878
Rensselaer, in southern part of town, on west side of an overhead bridge, near a pork-packing house, at south end of an open ditch where water goes underground; top of a round fishplate bolt set vertically in a rock (R. R. V. $O._1$)	21.993
Rensselaer, about 0.5 mile south of railroad station, about 200 yards south of Second Avenue, about 100 feet west of west rail of New York Central & Hudson River R. R., on water table of the brick car house of the electric railway company, on east side of building, 3 feet from northeast corner; bottom of a ¾-inch square, 3 feet above ground, lettered "U.S.B.M." (C. & G. S. N_1)	17.610
Rensselaer, at foot of Second Avenue, on lower side of avenue; cross cut on northwest side of northeast corner of stone foundation of steam gristmill (C. & G. S. Gristmill)	13.863
Rensselaer, a few rods south of bridge over Second Avenue, west side of railroad; cross on springing stone of north arch of culvert of Boston & Albany R. R. (U. S. Corps of Engineers b. m.)	14.017
Troy, on brick building of the Hudson River Terminal Warehouse Co., just east of the New York Central & Hudson River R. R., on Jackson Street, in southern edge of city; intersection of two lines cut in copper bolt leaded horizontally in front wall, 2 feet from northwest corner (C. & G. S. O_1)	26.805
Troy, on northwest corner of Monroe and River streets, in south end of east side of Trojan warehouse of the Fuller & Warren Co.; cross with square cut around it on north end of store door-sill (D. W., Troy 2)	23.758
Troy, water table at northeast corner of Monroe and First streets (City b. m. 1)	23.054
Troy, rear wall of brick building of the International Shirt & Collar Co., on northeast corner of Adams and River streets; intersection of two lines cut in end of copper bolt leaded horizontally in center of third brick from corner (C. & G. S. P_1)	27.181
Troy, northwest corner of Adams and First streets; water table of residence (City b. m. 2)	26.981

COHOES QUADRANGLE.

Cohoes to Crescent.[1]

Cohoes, lock 6, south gate of west lock; top of screw bolt fastening down iron collar (N. Y., 7a, 1875, L. S. 10)	69.724
Cohoes, west lock 15, top of point of coping, southwest corner of east wall (N. Y., 8a, 1875, L. S. 11)	159.810
Cohoes, on southwest gate of west lock 18; cross in a circle on top of coping (N. Y. 30, 1901, L. S. 12)	190.077

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[1] Information furnished by U. S. Lake Survey.

	Feet.
Cohoes, 2.9 miles north of, at end of south wing wall of towpath abutment of bridge 33; cross in circle on top of coping, marked "B. M." (N. Y. 35, 1901, L. S. 13)	192.291
Crescent, southwest corner of southeast wing of Lower Mohawk aqueduct; cross in circle on top of parapet wall (N. Y. 36, 1901, L. S. 14)	194.618

Cohoes to Crescent.[1]

Cohoes, No. 1 Mohawk Street; square cut on south corner of door-sill of house (D. W., Cohoes 2)	111.070
Cohoes, east bank of the hydraulic canal and on west end of Cohoes Falls; crowfoot on northeast corner of retaining wall (D. W., Cohoes 3)	155.762
Cohoes, near, south end of the breakwater above the Cohoes Water Co.'s gatehouse, near western end of dam; "square" or "arrow" in southwest corner of top stone (N. Y. 33)	160.686
Cohoes, near, east abutment of bridge across canal, southeast face, southeast corner of south wing; highest point of corner stone (b. m. 9a)	193.265
Crescent, near, south wing of northeast abutment of second bridge over the Erie Canal south of the Lower Mohawk aqueduct, about 3,200 feet south of southern end of this aqueduct; cross in circle cut in south corner of coping stone (D. W., Crescent)	192.331

Cohoes to Crescent.[2]

Cohoes, near lock 6, southwest gate of west lock; chiseled cross on coping between ends of anchor (Canal 27, N. Y. 17)	69.634
Cohoes, near, lock 7, southeast gate of east lock; chiseled square on coping between ends of anchor (Canal 29, N. Y. 18)	79.283
Cohoes, near, lock 8, southwest gate of west lock; chiseled cross in circle on coping between ends of anchor (Canal 31, N. Y. 19)	89.537
Cohoes, near, lock 9, southeast gate of east lock; chiseled cross in circle on coping between ends of anchor (Canal 33, N. Y. 20)	99.678
Cohoes, near, southwest gate of west lock 10; square cut on coping between ends of anchor (Canal 35, N. Y. 21)	109.625
Cohoes, near, southwest gate of west lock 11; chiseled cross in circle on coping between ends of anchor (Canal 37, N. Y. 22)	119.539
Cohoes, near, southwest gate of west lock 12; chiseled cross in circle on coping between ends of anchor (Canal 39, N. Y. 23)	129.732
Cohoes, near, southeast gate of east lock 13; chiseled cross in circle on coping between ends of anchor (Canal 41, N. Y. 24)	139.633
Cohoes, southeast gate of east lock 14; chiseled cross in circle on coping between ends of anchor (Canal 43, N. Y. 25)	149.576
Cohoes, southeast gate of east lock 15; chiseled cross in circle on coping between ends of anchor (Canal 45, N. Y. 27)	159.710
Cohoes, southeast gate of east lock 16; chiseled cross in circle on coping between ends of anchor (Canal 47, N. Y. 28)	169.653

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[1] Information furnished by Board on Deep Waterways.
[2] Rept. State Engineer and Surveyor for 1901.

	Feet.
Cohoes, southwest gate of west lock 17; chiseled cross on bolt head in coping between ends of anchor (N. Y. 29)	179.794
Cohoes, near, north end of berme abutment of bridge 31; point cut in square on northeast corner lower step (N. Y. 32)	192.092
Crescent, northwest corner, southwest wing of aqueduct; chiseled cross in circle on top of coping (Canal 60, N. Y. 37)	194.527
Crescent, near, on bridge 36, at center of towpath abutment, sixth course, under coping; chiseled cross in circle on face (Canal 62, N. Y. 38)	191.465

Point near Waterford to point near Bemis Heights.

Waterford, near, southeast gate of lock 1; chiseled cross in circle on coping between ends of anchor (Canal 1, N. Y. 1)	38.208
Waterford, near, southeast gate of lock 2; chiseled cross in circle on coping between ends of anchor (Canal 3, N. Y. 2)	49.558
Waterford, near, southwest gate of lock 3; chiseled cross in circle on coping between ends of anchor (Canal 5, N. Y. 3)	51.456
Waterford, near, northeast gate of lock 4; chiseled square on coping between ends of anchor (N. Y. 4)	55.477
Waterford, Waterford side cut, southwest angle, upper combined lock; chiseled square in circle on coping (Canal 9, N. Y. 5)	49.188
Waterford, 0.2 mile north of, on Delaware & Hudson Co. R. R. bridge over canal, north wing, towpath abutment; chiseled square on lower step (N. Y. 7)	54.490
Waterford, near, southeast gate of lock 5; chiseled square on coping between ends of anchor (N. Y. 8)	62.215
Waterford, near, southeast gate of lock 6; chiseled square on coping between ends of anchor (N. Y. 9)	75.426
Waterford, near, north wing of towpath abutment of bridge 11; chiseled square on third step (N. Y. 10)	81.044
Waterford, near, south wing of towpath abutment of bridge 13, third bridge north of lock 6; chiseled square on second step (N. Y. 11)	80.285
Waterford, near, south wing of towpath abutment of bridge 15; chiseled square on first step (N. Y. 12)	80.292
Waterford, near, north wing of towpath abutment of farm bridge 16; chiseled square on first step (N. Y. 14)	79.380
Waterford, near, southeast gate of lock 7; chiseled square on coping, between ends of anchor (N. Y. 15)	83.025
Mechanicville, near, north wing of towpath abutment of bridge 19, about 400 feet west of schoolhouse; chiseled square on first step (N. Y. 16)	88.049
Mechanicville, near, southeast gate of lock 8; chiseled square on coping between ends of anchor (N. Y. 17)	94.117
Mechanicville, near, southwest corner of south wing of bridge 21; chiseled square on lower step towpath abutment (N. Y. 18)	95.278
Mechanicville, near, south wing of towpath abutment of bridge 22; chiseled square on first step (N. Y. 19)	95.957
Mechanicville, south foundation of lift bridge 24, Park Avenue, towpath side; square cut on southwest corner (N. Y. 22)	95.090

	Feet.
Mechanicville, near, on pulp mill side track bridge, towpath side; chiseled square on southwest corner of south foundation (N. Y. 23)	95.230
Mechanicville, near, on wasteweir 5, south abutment, first wasteweir north of Mechanicville; chiseled square on northeast corner of coping stone (N. Y. 24)	94.331
Stillwater, near, southwest gate of lock 9; chiseled square on coping between ends of anchor (N. Y. 26)	103.178
Stillwater, near, south wing of berme abutment of bridge 30; chiseled square on second step (N. Y. 27)	103.485
Stillwater, near, south wing of berme abutment of bridge 32; chiseled square on lower step (N. Y. 28)	105.540
Stillwater, south wing of towpath abutment of bridge 33, on Sisson Street; chiseled square on lower step (N. Y. 29)	103.621
Stillwater, near, south wing of towpath abutment of bridge 35; chiseled square on second step (N. Y. 31)	104.565
Bemis Heights, near, south wing towpath abutment of farm and highway bridge 36; chiseled square on second step (N. Y. 32)	104.763
Bemis Heights, near, towpath abutment, Ford's farm bridge 38; chiseled square on projection south wing, about 3 feet above ground (N. Y. 33)	106.017
Bemis Heights, near, south wing towpath abutment of Britton's farm bridge 39; chiseled square on lower step (N. Y. 34)	105.144
Bemis Heights; chiseled cross on southeast corner of middle abutment of Bemis Heights wasteweir (N. Y. 36)	103.491
Bemis Heights, east angle of towpath abutment of bridge 41; point cut on face of masonry second course above ground (N. Y. 37)	104.092
Bemis Heights, south wing towpath abutment of Van Wie's farm bridge 44; chiseled square on lower step (N. Y. 39)	105.455

Waterford to point near Bemis Heights.[1]

Waterford, north abutment of Delaware & Hudson Co. R. R. bridge over the Fourth Branch of the Mohawk River; crowfoot on southwest corner of bridge seat (D. W., Waterford 1)	29.684
Waterford, west entrance of the Delaware & Hudson Canal Co. passenger (lower) station; square cut in south end of stone doorsill (N. Y. 6)	35.633
Waterford, about 3.5 miles north of, about 0.2 mile east of canal, on south side of George S. Forse's roadhouse on east side of Waterford and Whitehall road; square cut in east end of stone window sill of west cellar window (N. Y. 13)	52.170
Mechanicville, most northerly window on west face of the Hudson River Power Transmission Co.'s power house; square cut on north end of stone sill (D. W., Mechanicville 1)	61.141
Mechanicville, near southwest corner of sluice gates and at west end of weir of Hudson River Power Transmission Co.'s dam; square cut in surface of concrete masonry (D. W., Mechanicville 2)	55.891

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[1] Information furnished by Board on Deep Waterways.

	Feet.
Mechanicville, on Main Street, between tower and main entrance of the Presbyterian Church; square cut near south end of sill of basement window (N. Y., 20)	88.376
Mechanicville, Main Street, northeast corner of main building of the Methodist Episcopal Church; notch cut in angle of the stone water table (N. Y. 21)	88.569
Mechanicville, south door on west front of chipping mill at Duncan Co.'s pulp and paper mills; square cut on north end of stone sill (D. W., Mechanicville 5)	92.137
Mechanicville, near, on way to Stillwater, just east of the electric railway track at west end of the Boston & Maine R. R. bridge over Hudson River; head of bolt at base of first south column (N. Y. 25)	86.041
Stillwater; square cut in south end of large flat stone step at entrance to the First Methodist Episcopal Church (N. Y. 30)	89.047
Between Stillwater and Schaghticoke, on right bank of the Hoosick River, about 200 feet from water's edge in main channel, about 1,000 feet down-stream from mouth of the Tourhannock Creek; spike in bench cut in a root on west side of an elm tree (D. W., Stillwater 2)	99.857
Bemis Heights, on north abutment of wasteweir or sluice gate on Champlain Canal near iron truss canal bridge 36; top of an iron bolt with stone chiseled away around it in southeast corner of top stone (N. Y. 35)	103.243
Bemis Heights, about 1 mile north of, on south end of east abutment of iron truss canal bridge 39; square cut in southwest corner of stone in lower course (N. Y. 38)	105.063

SCHUYLERVILLE QUADRANGLE.

Point near Bemis Heights to point near Fort Edward.[1]

Bemis Heights, near, on Wilber's wasteweir, first step from top of middle abutment; square cut on northeast corner of stone (N. Y. 40)	102.361
Bemis Heights, near, on bridge 48, north wing of towpath abutment of farm bridge; chiseled circle on lower step (N. Y. 41)	104.820
Bemis Heights, near, on bridge 49, north wing of towpath abutment; circle cut on lower step (N. Y. 42)	105.279
Coveville, near, on bridge 50, south wing of towpath abutment of road bridge; chiseled circle on lower step (N. Y. 43)	104.567
Coveville, near, on bridge 51, north wing of towpath abutment of farm bridge; chiseled circle on lower step (N. Y. 44)	105.242
Coveville, near, on bridge 52, south wing of berme abutment of first bridge south of Salisbury's road bridge; chiseled square cut on second step (N. Y. 45)	104.747
Coveville, near, on bridge 53, north wing of towpath abutment of Salisbury's road bridge; chiseled square on first step (N. Y. 46)	105.208
Coveville, near, on farm bridge 54, north wing of towpath abutment; square cut on second step (N. Y. 47)	104.959

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Coveville, near, on bridge 55, north wing of towpath abutment, first bridge south of electric railroad bridge; chiseled circle on second step (N. Y. 48)	103.824
Coveville, on wasteweir; chiseled circle on coping or north abutment (N. Y. 49)	102.069
Coveville, near, on bridge 58, north wing of towpath abutment; chiseled circle on lower step (N. Y. 51)	106.006
Schuylerville, near, on bridge 59, south wing of towpath abutment; chiseled circle on lower step (N. Y. 52)	106.909
Schuylerville, near, on bridge 60, south wing of towpath abutment; chiseled square on lower step (N. Y. 53)	106.408
Schuylerville, on bridge 62, north wing of towpath abutment, first bridge south of Ferry Street; chiseled square on lower step (N. Y. 54)	106.275
Schuylerville, on bridge 64, Saratoga Street, north wing of towpath abutment, first bridge north of Ferry Street; chiseled square on lower step (N. Y. 56)	105.324
Schuylerville, near, south wing of towpath abutment; chiseled square on lower step. Bridge down. (N. Y. 58)	107.377
Northumberland, near, southeast gate of lock 10; chiseled circle with two diameters crossing at right angles on coping between ends of anchor (Canal b. m. No. 46)	109.046
Northumberland, near, southeast gate of lock 11; chiseled square on coping between ends of anchor (N. Y. 61)	112.353
Fort Miller, near, on bridge 69, south wing of berme abutment, first bridge north of lock 11; chiseled circle with two diameters crossing at right angles on lower step (N. Y. 62)	114.172
Fort Miller, near, on wasteweir 12, south abutment, towpath side; chiseled square on top step (N. Y. 63)	111.503
Fort Miller, near, southeast gate of lock 12; chiseled square on coping between ends of anchor (N. Y. 64)	121.202
Fort Miller, near, on wasteweir 13, south wing; chiseled square cut on top of coping (N. Y. 65)	120.279
Fort Miller, on bridge 74, north wing of east abutment of Fort Miller change bridge; chiseled square on lower step (N. Y. 66)	121.958
Fort Miller, near, on bridge 75, north wing of towpath abutment, first bridge south of lock 13; chiseled square in circle on lower step (N. Y. 68)	123.076
Fort Miller, near, southwest gate of lock 13; chiseled circle on coping between ends of anchor (N. Y. 69)	131.782
Fort Miller, near, on bridge 77, north wing of towpath abutment of farm bridge; chiseled square on lower step (N. Y. 70)	132.520
Fort Miller, near, on farm bridge 78, north wing of towpath abutment; chiseled cross in circle on second step (N. Y. 71)	131.949
Fort Miller, near, on Comer's farm bridge 79, north wing of berme abutment; chiseled cross in lower step (N. Y. 72)	132.516
Fort Miller, near, on farm bridge 80, south wing of berme abutment; chiseled cross on lower step (N. Y. 73)	132.830
Fort Miller, near, on bridge 81, south wing of towpath abutment; chiseled circle on lower step (N. Y. 74)	132.128

	Feet.
Fort Miller, near, southeast gate of lock 14; chiseled cross in circle coping between ends of anchor (Canal b. m. No. 63)	140.424
Fort Edward, near, on bridge 84, south wing of towpath abutment; chiseled circle on lower step (N. Y. 77)	139.961
Fort Edward, near, on bridge 85, north wing of towpath abutment; chiseled square on second step (N. Y. 78)	140.277
Fort Edward, near, on wasteweir 14; chiseled square on northwest corner of coping of south abutment (N. Y. 79)	138.433
Fort Edward, near, on bridge 87, south wing of berme abutment; chiseled square on lower step (N. Y. 80)	141.831
Fort Edward, near, on bridge 88, north wing of towpath abutment of road bridge; chiseled cross in circle on lower step (N. Y. 81)	141.445

Wilbur's Basin to point near Fort Edward.[1]

Wilbur's Basin, north end of semicircular coping on stonework of the outlet of basin; square cut on southwest corner of stone	102.059
Coveville, about 1,000 feet east of, on south abutment of Champlain Canal bridge; circle cut on northeast corner of last stone of second course above surface of ground	105.797
Schuylerville, on Ferry Street Bridge, "Canal bridge 60," on north wall of east or towpath abutment; chiseled circle on northeast corner of ninth stone of third course from ground (D. W.)	105.905
Schuylerville, on south wing wall of west abutment of Champlain Canal bridge 62, on road leading to new iron truss bridge over Hudson River; chiseled square on southeast corner of stone at south end of second course of masonry above water surface	104.352
Northumberland, south end of east wall of lock 10; square cut on southeast corner of coping (N. Y. 60)	109.102
Fort Miller, about 1,700 feet north of Tharp & Wegman's pulp mill (D. W.), on east side of highway along east bank of Hudson River, in south end of south window sill in front of brick blacksmith shop; square cut (N. Y. 67)	123.226
Moses Kill, "on bridge 83" (N. Y.), on "the Champlain Canal bridge just north of the aqueduct" (D. W.) on "west abutment" (D. W.), or "north wing towpath abutment" (N. Y.), chiseled square "on rear of second course of masonry" (N. Y.), or "on northwest corner of north stone in second course above ground (D. W.)	141.898
Fort Edward, near, "across the river from and almost 600 feet south of mouth of Snook Kill" (D. W.), "on road bridge 90 over canal on north wing, west of towpath abutment; chiseled square on second step" (N. Y.) or "in northeast corner of north stone third course above ground" (D. W.) (N. Y. 82)	141.968

GLENS FALLS QUADRANGLE.

Fort Edward to Smiths Basin.[2]

Fort Edward, near, on bridge 91, south wing of berme abutment of farm bridge, about 600 feet north of brick house in field; chiseled cross in circle on lower step (N. Y. 83)	140.938

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[1] Information furnished by Board on Deep Waterways.
[2] Rept. State Engineer and Surveyor for 1901.

	Feet.
Fort Edward, near, on farm bridge 93, south wing of berme abutment; chiseled cross in circle on lower step (N. Y. 84)	140.193
Fort Edward, near, on farm bridge 94, north wing of berme abutment; chiseled cross in circle on lower step (N. Y. 85)	141.201
Fort Edward, near, on road bridge 95, first bridge south of electric railroad, north wing of berme abutment; chiseled cross in circle on lower step (N. Y. 86)	141.804
Fort Edward, near, on bridge 96, north wing of towpath abutment; chiseled cross in circle on second step (N. Y. 87)	141.530
Fort Edward, at edge of canal, towpath side of aqueduct 4, chiseled cross in circle on south end of coping of wall (N. Y. 88)	139.936
Fort Edward, near, southeast gate of lock 15; chiseled cross in circle on coping between ends of anchor (Canal b. m. 79)	148.524
Fort Edward, near, on bridge 99, first bridge north of lock 15, south wing of berme abutment; chiseled cross in circle on lower step (N. Y. 91)	149.759
Fort Edward, 1.2 miles north of, on wasteweir 15, north abutment; chiseled square on coping of east wing (N. Y. 92)	148.307
Glens Falls, on bridge 100, north wing of berme abutment of change bridge at Glens Falls feeder; chiseled cross in circle on lower step (N. Y. 93)	152.854
Glens Falls, near, on bridge 101, north wing of berme abutment of farm bridge; chiseled circle on second step (N. Y. 94)	150.422
Dunhams Basin, near, on bridge 102, north wing of berme abutment of Dunham's road bridge; chiseled square on lower step (N. Y. 96)	148.887
Dunhams Basin, on northwest corner of a red barn, on towpath; chiseled square on stone foundation (N. Y. 97)	147.776
Dunhams Basin, about 3 miles north of, about 30 feet from angle of towpath in Davison's front yard, spike in west side of elm tree (N. Y. 98)	150.733
Smiths Basin, on bridge 103, north end of second course of masonry, towpath abutment; chiseled square on projection (N. Y. 99)	150.595
Smiths Basin, near, on bridge 104, north wing of towpath abutment; chiseled square on lower step (N. Y. 100)	151.467

Fort Edward to Smiths Basin.[1]

Dunhams Basin, south abutment of Delaware & Hudson Co. bridge over canal overflow, 600 feet south of highway; top course of masonry; chiseled square on northwest corner of west stone (N. Y. 95)	145.690
Smiths Basin, small plate-girder bridge of Delaware & Hudson Co., just north of station, on south abutment; chiseled square on northwest corner of west stone of top course of masonry (N. Y. 101)	141.559

FORT ANN QUADRANGLE.

Smiths Basin to point near Comstock.[1]

Smiths Basin, on bridge 105, north wing of towpath abutment; chiseled square on second step (N. Y. 102)	149.905

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Smiths Basin, near, on bridge 106, south wing of berme abutment; chiseled cross in circle on lower step (N. Y. 103)	149.809
Smiths Basin, near, on bridge 107, north wing of berme abutment; chiseled square on lower step (N. Y. 104)	149.916
Smiths Basin, near, on bridge 108, south wing of berme abutment; chiseled square on lower step (N. Y. 105)	149.810
Fort Ann, 1.5 miles south of, on bridge 110, north wing of berme abutment or road bridge; chiseled square on lower step (N. Y. 106)	151.327
Fort Ann, near, on road bridge 111, north wing of towpath abutment; chiseled square on lower step (N. Y. 107)	149.109
Fort Ann, near, on farm bridge 112, north wing of towpath abutment; chiseled square on lower step (N. Y. 108)	151.898
Fort Ann, near, on bridge 113, south wing of berme abutment of farm bridge; chiseled square on lower step (N. Y. 109)	151.156
Fort Ann, near, southwest gate of lock 16; chiseled square on coping between ends of anchor (N. Y. 110)	148.345
Fort Ann, near, northeast gate of lock 18; chiseled square on coping between ends of anchor (N. Y. 111)	132.154
Comstock, near, on Dewey's private bridge, second course of masonry of south wing of towpath abutment; chisel mark on projection of fifth stone (N. Y. 113)	128.311
Comstock, near, northwest gate of lock 19, chiseled square on coping between ends of anchor (N. Y. 114)	126.648
Comstock, near, on Comstock's road bridge 118, south wing of towpath abutment; chiseled square on projection of first course of masonry (N. Y. 116)	125.133
Comstock, near, on private road, towpath abutment (near center); chiseled circle on projection of fifth course of masonry below coping (N. Y. 117)	124.715
Comstock, near, on bridge 120, south wing of towpath abutment; chiseled square on second step (N. Y. 118)	126.042
Comstock, near, northwest gate of lock 20; chiseled square on coping between ends of anchor (N. Y. 119)	126.812
Between Comstock and Whitehall, on bridge 125, about 1 mile north of lock 20, north wing of berme abutment; chiseled square cut on lower step (N. Y. 121)	123.241
Between Comstock and Whitehall, on bridge 126, north wing of towpath abutment; chiseled square on lower step (N. Y. 122)	124.043

Fort Ann to point near Comstock.[1]

Fort Ann, north abutment of the Delaware & Hudson Co. bridge over canal, on coping of parapet wall, directly opposite space between two bridges; cross cut on north edge of stone (N. Y. 112)	139.371
Comstock, 2,800 feet south of station, on east side of roadbed of Delaware & Hudson Co.; square cut in southeast corner of south stone of coping of culvert (N. Y. 115)	131.082

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Between Comstock and Whitehall, south berme abutment of Delaware & Hudson Co. bridge over canal, on west side at north end of plate girder where it connects with middle truss of bridge; square cut on southeast corner of stone (N. Y. 120)	133.672

WHITEHALL QUADRANGLE.

Bench marks near Whitehall.[1]

Whitehall, near, on bridge 127, north wing of towpath abutment; chiseled square on lower step (N. Y. 123)	133.943
Whitehall, near, on farm bridge 129, north wing of towpath abutment; chiseled square on lower step (N. Y. 124)	123.121
Whitehall, near, on farm bridge 130, south wing of berme abutment; chiseled cross in circle on second step (N. Y. 125)	123.884
Whitehall, near, on bridge 131, first bridge south of Delaware & Hudson Co. bridge, north wing of berme abutment; chiseled square on lower step (N. Y. 126)	125.575
Whitehall, on wasteweir 24, north wall, east stone, about 1,100 feet south of Delaware & Hudson Co., Rutland branch; chiseled square on coping (N. Y. 127)	122.695
Whitehall, on Fordman Street Bridge 132, north wing of towpath abutment; chiseled square on lower step (N. Y. 128)	124.894
Whitehall, northeast gate of lock 21, between ends of anchor; chiseled square on coping of lock 21 (N. Y. 129)	121.505

Whitehall to Putnam.[2]

Whitehall, near, top course of south abutment of canal sluice, 1,100 feet south of bridge over canal; square cut on east stone (Whitehall 1)	122.703
Whitehall, lower lock 23, between end of anchor and northwest gate; coping of west wall (N. Y. 130)	103.564
Whitehall, north of town, about 1 foot above ground, near middle of east side of second rock cut; square cut on shelf of rock, marked "U.S.B.M."	107.143
Snody Dock, about 1,000 feet south of, on west side of roadbed of Delaware & Hudson Co.; square cut on northwest corner of north stone of coping of culvert	105.683
Chubbs Dock, about 400 feet north of station, top course of north abutment of small plate-girder bridge 5, Delaware & Hudson Co.; square cut on southeast corner of east large stone	106.282
Putnam, on west side of railroad track near north end of first rock cut south of station; chiseled cross in circle on a ledge of rock (U. S. C. S. 39)	106.630
Putnam, west face of large Delaware & Hudson Co. culvert; square cut on southeast corner of stone coping	105.260

TICONDEROGA QUADRANGLE.

Wright to Crown Point.[2]

Wright, about 1,800 feet north of, south abutment of Delaware & Hudson Co. bridge 16, second course of masonry from top; square cut in northeast corner	107.628

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[1] Rept. State Engineer and Surveyor for 1901.
[2] Information furnished by Board on Deep Waterways.

	Feet.
Fort Ticonderoga, south of station; square cut on southwest corner of masonry projection of water tank	108.568
Five Mile Point, about 2,200 feet south of, between Addison Junction and Crown Point, east coping of culvert on Delaware & Hudson Co. line over creek entering Lake Champlain; square cut on southeast corner	106.876
Crown Point, about 2,800 feet north of, south end of east wing wall south abutment of Delaware & Hudson Co. bridge 23 over Putnam Creek; square cut on surface of coping	113.405
Fort Frederick, about 1,600 feet south of ruins of old English fort, in center of thornbush thicket, 1,700 feet west of highway; lead bolt in center of pyramid cut on natural rock outcrop, marked "U.S.C.S. Base Line, 1872"	161.144
Crown Point lighthouse, on east side, just south of corner of second course above ground; square cut in masonry	129.824

PLATTSBURG QUADRANGLE.

Bench mark at Plattsburg.

Plattsburg, in north wall of culvert at crossing of Delaware & Hudson Co. track and Bridge Street, at south dock, in large stone in third course from botton and fifth from top; five holes in nearly a horizontal line; middle hole filled with lead and marked "U.S." (C. & G. S. b. m.)	109.065

ROUSE POINT QUADRANGLE.

Coopersville via Rouse Point to point near Champlain[1]

Coopersville, 1.5 miles north of, about 800 feet south of Leggets crossing, on west side of Delaware & Hudson Co. track, 2 feet west of west side of opening and 6 inches back from north edge of a culvert; point in a square on iron pin in coping stone	132.740
Rouse Point, north side of Chapman Block, 20.6 feet west from northeast corner, on west side of Lake Street and south side of Chapman Street, 1.6 feet above ground; cross in circle on water table	107.950
Fort Montgomery, north face of bastion B, about 3 feet from angle with east curtain of fort; level of base of scarp wall (U. S. Corps of Engineers b. m.)	94.000
Champlain, about 7,500 feet from the Oak Street Bridge, between Cooperville and Champlain, on south side of highway, on east side of Great Chazy River; nail driven in root on southwest side of an elm tree 3¾ feet in diameter (D. W., Champlain 1)	131.839
Champlain, on west side of north abutment of the Oak Street Bridge over Great Chazy River; 2-inch square cut in top of first step above main abutment (D. W., Champlain 2)	108.505
Champlain, about 1 mile north of, near east side of front door of the Champlain waterworks; 1½-inch square cut in stone step (D. W., Champlain 3)	163.978

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[1] Information furnished by Board on Deep Waterways.

	Feet.
Champlain, about 2.6 miles northwest of, on north side of Great Chazy River, about 80 feet west of a small creek, about 1,400 feet north of north bank of Great Chazy River, about 730 feet south of international boundary line; nail in root on west side of an elm tree 1½ feet in diameter (D. W., Champlain 4)	170.133

MOIRA QUADRANGLE.

Bench marks near Hogansburg.

Hogansburg, main tower of St. Patrick's Catholic Church; center punch mark in a brass bolt cemented into northeast face of east buttress (U. S. Corps of Engineers P, Hogansburg)	178.260
Hogansburg, 1 foot from east corner of Catholic convent, southeast face, about 2 feet above surface of ground; center punch mark in a brass bolt cemented into limestone water table, marked "U. S. C. S. U. S. Corps of Engineers C, Hogansburg"	179.950
Raquette River, about 350 feet northwest of northwest bank of, 20.5 feet southeast of a large white pine tree 9 feet in circumference; top of roundheaded brass bolt set in a concrete base, marked "U. S. P. B. M. 1." Mark is covered by 1.2 feet of earth (U. S. Corps of Engineers 1)	171.882
Grass River, just east of mouth of, on north side of Grass River road, 3 feet south of north fence line of road and on west fence line of house lot of William Tucker; top of roundheaded brass bolt set in a concrete base, marked "U. S. P. B. M. 2" (U. S. Corps of Engineers 2)	207.981

At Fort Covington.

Fort Covington, Grand Trunk Ry. bridge over the Salmon River, 1 foot from south edge and 1 foot from east edge of east abutment; 2-inch square (D. W., Fort Covington)	166.452

MASSENA QUADRANGLE.

Mouth of Grass River to Louisville Landing.

Farm of John Wood, opposite, 3 feet south of fence on north side of river road and in center of north-south road branching off river road, 25 feet east of a honey-locust hedge on west line of said farm; top of a roundheaded brass bolt cemented into a concrete base (U. S. Corps of Engineers 3)	204.378
Pollys Creek, 420 feet east of, 5.5 feet from south fence of road, on south side of river road on line of a stone fence running north and south, opposite barnyard of Frank Polly's farm; top of roundheaded brass bolt set in concrete base (U. S. Corps of Engineers 4)	221.378
House of Norman Hopson, corner of fence in turn of road at, on north side of river road, 2.8 feet from fence corner; top of roundheaded brass bolt set in concrete base (U. S. Corps of Engineers 5)	247.357

	Feet.
Richards Landing, 3 feet north of south fence line of river road, 58.5 feet east of east face of Isaac Richard's residence; top of roundheaded brass bolt set in concrete base (U. S. Corps of Engineers 6)	232.381
Louisville Landing, 2.5 feet from northwest corner of hotel of R. B. Matthews, west face of building; center punch mark in brass bolt cemented in foundation stone 0.9 foot above ground, marked "U. S." (U. S. Corps of Engineers, Louisville Landing).	230.010

WADDINGTON QUADRANGLE.

Louisville Landing to Waddington.

Charles Whalen's house, 22.7 feet west and on west fence line of, on north side of river road, 3 feet east of fence; top of roundheaded brass bolt set in concrete base (U. S. Corps of Engineers 7)	224.211
Bradford Hill, opposite house of William Bradford, 6.8 feet from the north fence line of river road, in orchard on north side of river road; top of roundheaded brass bolt set into top of a large granite bowlder (U. S. Corps of Engineers 8)	259.415
Coles Creek, on north side of river road, abreast of Egg Island, 5.8 feet south of south corner of large wooden barn of William Hosmer; top of roundheaded brass bolt set in concrete base (U. S. Corps of Engineers 9)	238.826
Murphys Island, abreast of, on north side of river road, 4.2 feet south of north fence line, on the property line between the Dartis and Scott lots; top of roundheaded brass bolt set into concrete base (U. S. Corps of Engineers 10)	236.264
Waddington, on southwest face of St. Paul's Episcopal Church, 3 inches from south corner and 24 inches above ground; center punch mark in brass bolt cemented into upper foundation stone, marked "U. S. 11" (U. S. Corps of Engineers 11)	278.401
Waddington, on Presbyterian Church, 12 feet northeast from center of main entrance, 1.6 feet from outer corner of south buttress, 1.5 feet above ground; center punch mark in a brass bolt cemented into buttress, marked "U. S. A." (U. S. Corps of Engineers A)	272.883
Waddington, northeast face of town hall, 1.9 feet from north corner and 0.8 foot above ground; center punch mark in a brass bolt cemented into foundation masonry; marked U. S. B. (U. S. Corps of Engineers B)	276.065
Point Three Points (better known as White House Point or Waddells Point), south side of river road at turn just west from; top of roundheaded brass bolt cemented into top of large granite bowlder (U. S. Corps of Engineers 12)	253.296

RED MILLS QUADRANGLE.

Tilden to Lisbon.

Tilden, just opposite Iroquois Point, on east property line of post office, on north side of river road; top of roundheaded brass bolt cemented into top of bowlder (U. S. Corps of Engineers 13A).	273.423

	Feet.
Tilden, on north side of river road, on town line between Lisbon and Waddington, on southeast face of post office, 7.2 feet from south corner, 0.8 foot above ground; center punch mark in a brass bolt cemented into foundation stone, marked "U. S." (U. S. Corps of Engineers 13)	269.953
Silas Samon's property, at a turn in the fence on east property line, on north side of river road, 7 feet west from a large sugar-maple tree blazed and marked "U. S. P. B. M. 14;" top of roundheaded brass bolt set into concrete base covered by 1 foot of earth (U. S. Corps of Engineers 14)	273.525

OGDENSBURG QUADRANGLE.

Lisbon to Ogdensburg.

Lisbon, south side of river road, on west corner of north face of stone Episcopal Church, 28 inches above ground; center punch mark in a brass bolt cemented into corner stone, marked "U. S. 15" (U. S. Corps of Engineers 15)	278.723
Ogdensburg, below, in New York State Hospital grounds, on north side of Infirmary Building, rear, 12.7 feet from west corner, 50.5 feet from center of doorway on north side, 4 feet above ground; center punch mark in a brass bolt cemented into red sandstone, marked "U.S." (U. S. Corps of Engineers 16)	282.230
Ogdensburg, on southwest corner of the Armory building, Ford Street, 34 inches above surface of ground; center punch mark in a brass bolt cemented into a 12 by 18 inch red sandstone, marked "U.S.A." (U. S. Corps of Engineers A, Ogdensburg)	277.897
Ogdensburg, corner of Ford and Caroline streets, on southeast face of town hall and opera house, 6.25 feet from southwest corner of building, 2.25 feet above surface of ground; center punch mark in a brass bolt cemented into a 12 by 18 inch foundation stone, marked "U.S.B." (U. S. Corps of Engineers B, Ogdensburg)	280.745
Ogdensburg, on northeast corner of the United States customhouse, State Street, 7½ inches west of said corner of building, on north face, 4 feet above sidewalk; center punch mark in a brass bolt cemented into coping corner stone, marked "U.S.C." (U. S. Corps of Engineers C, Ogdensburg)	280.877
Ogdensburg, on north face of United States lighthouse, on west pier at mouth of Oswegatchie River, 48½ inches southwest of north corner of house, 32½ inches above surface of ground; center punch mark in a brass bolt cemented into coping stone, marked "U.S.D." (U. S. Corps of Engineers D, Ogdensburg)	251.022

BRIER HILL QUADRANGLE.

Ogdensburg to Oak Point.

Ogdensburg, 3 miles above Seymour House, 31.7 feet south of center of track of New York Central & Hudson River R. R., near Nevins Point, 25.5 feet north of a large elm tree 30 inches in diameter, blazed and marked "U.S.," 200 feet south of a stone ice house, about 250 feet northeast of a stone barn; top of roundheaded brass bolt set in concrete base, 12 inches below surface of ground (U. S. Corps of Engineers 17)	259.397

	Feet.
Ogdensburg, 6 miles above Seymour House, about 900 feet northwest from house of Le Rock, 45.6 feet northwest of center of track of New York Central & Hudson River R. R., 292.5 feet northeast of section post 23–24, 124 feet west from a wagon road leading from Le Rock's house to St. Lawrence River, about 200 feet southwest from a small stone boathouse on river bank, 70 feet north of a telegraph pole blazed and marked "U.S.;" top of square-headed brass bolt cemented into bedrock, 6 inches underground (U. S. Corps of Engineers 18)	249.048
Dows Point, 25.8 feet northwest from center line of railroad, 52 feet southeast from ledge of rock on St. Lawrence River bank, 20° northwest, a distance of about 1,000 feet from residence of George Beattie, 2 miles below Morristown, 331 feet southwest from southwest corner of "Rock Ledge" summer cottage, 60 feet northwest from a blazed telegraph pole; top of round-headed brass bolt cemented into bedrock (U. S. Corps of Engineers 19)	249.346
Morristown, in northwest end of, on northwest corner of lumber office of Gillies Bros. Co. (Ltd.), 6 inches from northwest corner and about 18 inches above ground; center punch mark in a brass bolt cemented into coping stone, marked "U.S.A." (U. S. Corps of Engineers A, Morristown)	272.688
Morristown, 68 feet west and across the road from p. b. m. A, on east face of a stone warehouse, 8 inches from southeast corner; center punch mark in a brass bolt cemented into corner stone of foundation masonry, marked "U.S.B." (U. S. Corps of Engineers B, Morristown)	271.288
Morristown, on west side of bay, on east face of south wing of residence of Henry Chapman, 17 inches above surface of ground; center punch mark in a brass bolt cemented into masonry marked "U.S.C." (U. S. Corps of Engineers C, Morristown)	257.998
Morristown, near shore of St. Lawrence River, on east side of a small bay, 1.6 miles above p. b. m. C, on range with upper end of Old Mans Island and Umbrella Island, at foot of a ledge of rock at Rowley's or Homes Point, 6 feet from face of ledge and about 180 feet north of river road; top of roundheaded brass bolt cemented into slab of limestone embedded in sand and gravel (U. S. Corps of Engineers 20)	245.527
Oak Point, 2½ miles northeast from, 1,000 meters northeast from crossroad known as the Blackstone road, about 0.8 mile east of town line between Morristown and Hammond, on north side of river road at turn opposite center of crossroad running southeast; top of roundheaded brass bolt cemented into top of bowlder 5 by 3 feet (U. S. Corps of Engineers 21)	343.033
Oak Point, 0.2 mile south of, 3 feet from south fence line of river road, 71 feet from southeast fence corner at intersection with road north to Oak Point on crest of hill; top of roundheaded brass bolt cemented into sandstone bedrock, 6 inches below surface of ground (U. S. Corps of Engineers 22)	339.232

	Feet.
Oak Point, 0.2 mile south of, on west side of road, 73 feet northwest of intersection of river road and Old Point road, on crest of hill, 7 feet south of large bowlder marked "U. S. P. B. M. O. P.," with an arrow pointing to bench; top of roundheaded brass bolt cemented into sandstone bedrock, 18 inches below surface of ground (U. S. Corps of Engineers b. m.)	338.427

ALEXANDRIA BAY QUADRANGLE.

Oak Point to Fishers Landing.

Oak Point, 3.2 miles from, in valley of Chippewa Creek, 375 meters from iron bridge over Chippewa Creek, about 50 meters south of creek, northeast of stone residence of Alexander and Robert More by the Chippewa road, 25 meters south from blazed 30-inch white oak, and 2 meters west from a bare surface in rock into which is cut "U. S. P. B. M. 23," with an arrow pointing to mark; top of roundheaded brass bolt cemented into sandstone bedrock (U. S. Corps of Engineers b. m.)	260.031
Chippewa village, about 2.2 miles east of, on stone dwelling house of Alexander and Robert More, in Chippewa Creek valley, on river road, 22 inches above ground; horizontal line cut in center of a smoothed square surface on south face (U. S. Corps of Engineers 23 A)	259.392
Chippewa village, on north face of northeast corner of schoolhouse of district No. 11, 18 inches west from northeast corner, 38 inches above bedrock; center punch mark in brass bolt cemented into a corner stone (U. S. Corps of Engineers C. V.)	290.698
Chippewa village, 4.8 feet north of northwest corner of a barn on property of Mrs. Alexander Wilson, 130 feet west from house, 400 meters southwest from "C. V.;" top of roundheaded brass bolt cemented into bedrock (U. S. Corps of Engineers 24)	290.332
Chippewa village, about 3.5 miles above, about 0.8 mile northeast from county line between Jefferson and St. Lawrence counties, near the Callaboga road, on property of George Schermerhorn, at southwest end of a stone fence forming the road fence for property of William Catlin, 11.8 feet northwest of fence (U. S. Corps of Engineers 25)	367.141
Alexandria Bay, about 5.2 miles northeast from, on property of George Springer, 111 feet south of center line of river road, 836 feet northeast from intersection of river road and northwest-southeast road to Redwood, 0.8 mile southwest from Springers Mill on Crooked Creek, 238 feet southeast from a white frame house on north side of river road, 141.7 feet south from barn of said house; top of roundheaded brass bolt cemented into bedrock (U. S. Corps of Engineers 26)	333.740
Alexandria Bay, about 1.2 miles east from, on property of C. M. Tamblin, 50.5 feet south of south fence line of river road, about 300 feet east from barn of C. M. Tamblin, 193.5 feet southeast from small frame house; top of roundheaded brass bolt cemented into bedrock (U. S. Corps of Engineers 27)	273.534

	Feet.
Alexandria Bay, on west side and 8 inches from southwest corner of stone building, general store of Cornwall Bros.; center punch mark in end of a brass bolt cemented into water table or coping stone (U. S. Corps of Engineers A, Alexandria Bay)	259.164
Alexandria Bay, on front of Reformed Church, 7 feet northwest of east corner of church; center punch mark in a brass bolt cemented into stone (U. S. Corps of Engineers, B)	284.243
Alexandria Bay, about 2 miles southwest of, 0.2 mile east of George Clyde's residence, 10 feet southeast of a fence running S. 66° E. from east corner of a large barn on southeast side of road, 161.5 feet from east corner of barn, 450 feet from a cross-road leading to river, 225 feet southeast of southeast fence line of Clayton-Alexandria Bay road; top of roundheaded brass bolt cemented into bedrock (U. S. Corps of Engineers 28)	288.920

GRINDSTONE QUADRANGLE.

Fishers Landing to Clayton.

Fishers Landing, 36 feet northeast of north fence corner and 72.6 feet from south corner of Mrs. Toms's residence, 131 feet northwest of west corner of a house on opposite side of road, 2.3 feet southeast of fence; top of roundheaded ¼-inch brass bolt cemented into bedrock 6 inches below the surface of ground (U. S. Corps of Engineers 29)	274.350
Clayton, 3 miles northeast of, 144 feet west of a culvert over a dried-up creek, 16 feet from the fence line, on north side of road opposite the property of Fetterly, 43 feet east of southeast corner of Fox property, 277 feet west of northwest corner of frame house south of the road, about 0.2 mile west of schoolhouse located on top of ridge east of valley; top of roundheaded brass bolt cemented into bedrock, marked "U. S. P. B. M." (U. S. Corps of Engineers 30)	264.216

CLAYTON QUADRANGLE.

Clayton to Dodges Bay.

Clayton, 6 inches from southwest corner and on south side of Catholic Church, on east side of James Street, 200 feet southwest of intersection of Mary Street; center punch mark in end of a brass bolt cemented into cornerstone of water table (U. S. Corps of Engineers A, Clayton)	278.815
Clayton, on front of stone residence of E. C. Porter, 8 inches from northwest corner, on east side of John Street, between Jane and Hugunin streets; center punch mark in end of a brass bolt cemented into corner stone of water table (U. S. Corps of Engineers B, Clayton)	264.376
Clayton, on west side of stone residence of Hall B. Dewey, at southwest corner of Hugunin and Merrick streets, one block south of St. Lawrence River, 3.5 feet from northwest corner of building, 2.3 feet above surface of ground marked "U. S. C.;" center punch mark in end of a brass bolt cemented in stone of masonry wall (U. S. Corps of Engineers C, Clayton)	260.628

	Feet.
Clayton, about 3 miles southwest of, 52 feet south of an angle in road, on timber line at southwest end of a clearing, about 500 feet southeast of a log cabin, 3.5 feet north of a spike driven in a blaze on a 14-inch oak tree; top of roundheaded brass bolt cemented in large sandstone bowlder (U. S. Corps of Engineers 31)	364.673
Clayton, about 6 miles southwest of, 3 feet west of vertical ledge of rock along creek, 46.3 meters S. 25° E. from center of an arch bridge over creek, 10.3 meters S. 20° W. of 14-inch elm east of creek; top of roundheaded brass bolt cemented into bedrock (U. S. Corps of Engineers 32)	272.870
Dodges Bay, about 800 feet east of west end of, on north side of road, 22 feet from ledge of rock at shore, 30.4 feet west of a 10-inch ash tree, 64.3 feet north from a nail driven in a blaze facing mark on a maple tree on fence line south of road, 66.3 feet north of intersection of fence along south side of road with a division line fence to south; top of a roundheaded brass bolt cemented into bedrock (U. S. Corps of Engineers 33)	259.799

CAPE VINCENT QUADRANGLE.

Cape Vincent to Tibbetts Point.

Cape Vincent, 3.5 miles below, in pasture north of road; 520 feet north from large bowlder on north fence line, 215 feet west of 10-foot plank bridge over a dried-up creek; 344 feet west of a crossroad leading south to a frame house, at foot of a hill in Hesler Woods, 37 feet east from spike on blaze of a 12-inch elm tree; top of roundheaded brass bolt cemented into bedrock (U. S. Corps of Engineers 34)	260.293
Cape Vincent, at southwest corner of the United States fish hatchery, on east side of building, 0.38 meter from corner, 1 meter above surface of ground; center punch mark in end of a brass rod cemented in corner stone (U. S. Corps of Engineers A, Cape Vincent)	254.146
Cape Vincent, 12 inches south of northwest corner of the Jerome House, at northeast corner of a street intersection two blocks south of the Cleveland Seed Co.'s dock and warehouse; 1-inch square smooth level surface cut on top of water table, marked "U. S. B." (U. S. Corps of Engineers B, Cape Vincent)	259.472
Cape Vincent, 39 inches west of northeast corner of tower of Catholic Church; center punch mark in end of a brass rod cemented in corner stone (U. S. Corps of Engineers C, Cape Vincent)	272.165
Tibbetts Point, on north side of lighthouse tower, on shore of Lake Ontario, 6 inches above surface of ground; center punch mark in end of brass rod cemented in foundation stone (U. S. Corps of Engineers 35)	263.854

SCHENECTADY QUADRANGLE.

Crescent to point 3 miles west of Schenectady.[1]

	Feet.
Vischer Ferry, 5 miles east of, in center of face of towpath abutment of bridge 37; cross in circle in ledge of rock in sixth course below coping, marked "B. M." (N. Y. 39, 1901; L. S. 15)......	193.033
Vischer Ferry, 3.3 miles east of, in face of towpath abutment, near west angle of bridge 39; cross in circle in ledge of rock in sixth course below coping (N. Y. 42, 1901; L. S. 16)................	192.300
Vischer Ferry, 2.2 miles east of, near center of face of towpath abutment of bridge 43; cross in circle in ledge of rock in sixth course below coping (N. Y. 45, 1901; L. S. 17)................	190.750
Vischer Ferry, 1 mile east of, at east angle of south abutment of bridge 46; cross in circle in fifth course of masonry below coping (L. S. 18)..	190.870
Vischer Ferry, east wing wall of towpath abutment of bridge 48; square cut on third course of masonry (N. Y. 49; L. S. 19)......	203.274
Fondas Basin, towpath abutment of bridge 49; chiseled cross in circle on top of coping at east end of east wing wall (L. S. 20)..	212.264
Rexford Flats; square cut on northeast corner of coping of lock 21, about 10 feet from end of anchor of southeast gate of south lock (N. Y. 52, 1901; L. S. 21)..................................	221.521
Rexford Flats, northeast gate of north lock 22; square cut on coping between ends of anchor (N. Y. 53, 1901; L. S. 22)......	231.431
Rexford, 1.8 miles west of, in face of towpath abutment of bridge 52, near west angle; cross in circle in ledge of rock on lower course (N. Y. 59, 1901; L. S. 23)............................	231.324
Schenectady, 1.8 miles east of, at west end of towpath abutment of Delaware & Hudson Co. bridge; square on second step, marked "B. M." (N. Y. 61, 1901; L. S. 24)..........................	234.900
Schenectady, at west end of towpath abutment of swing bridge at Schenectady Locomotive Works; square cut on southwest corner of coping (N. Y. 64, 1901; L. S. 25)....................	235.129
Schenectady, west wing wall of towpath abutment of Green Street Bridge over canal; square cut on first step (N. Y. 66, 1901; L. S. 26)..	232.935
Schenectady, northeast column of Church Street lift bridge; square cut on southeast corner of foundation stone (L. S. 27)..........	232.937
Schenectady, 1.8 miles west of, on northwest corner of east abutment of bridge 63; square cut on top of north stone in third course of stones (D. W. b. m., 125, 1898; L. S. 28)............	235.043
Schenectady, 2.6 miles west of, on northeast gate of north lock of lock 23; cross in circle, marked "B. M." (N. Y. 72, 1901, L. S. 29).	239.596
Schenectady, 3.3 miles west of; square cut on east corner of northeast end of shelf at lower end of lock 24, marked "B. M." (D. W. 1898, L. S. 30)..	242.648

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[1] Information furnished by U. S. Lake Survey.

Dunsbach Ferry to Schenectady.[1]

	Feet.
Dunsbach Ferry, about 200 feet south of south end of bridge over Mohawk River, on south side of house; southeast corner of bottom stone of doorstep	186.148
Niskayuna, southwest corner of station of Troy and Schenectady branch of New York Central & Hudson River R. R.; cross cut on corner of top stone of foundation	196.219
Vischer Ferry, about 1 mile west of, on Troy and Schenectady branch of New York Central & Hudson River R. R.; north corner of north stone of northeast end of culvert 37	199.576
Aqueduct station, about 6,000 feet east of, on the Troy and Schenectady branch of the New York Central & Hudson River R. R.; cross cut in southeast corner of capstone of culvert 40	271.930
Aqueduct station, at ladies' entrance to station of the Troy and Schenectady branch of the New York Central & Hudson River R. R.; square cut in extreme west corner of step (N. Y. 57)	270.505
Aqueduct station, near, about 3,000 feet west of railroad station; bridge 44 of the Troy and Schenectady branch of the New York Central & Hudson River R. R., extreme southeast corner of top of keystone	264.142
Schenectady, opposite the Schenectady Locomotive Works, about 400 feet east of Romeyn Street crossing; square cut on southwest end of the top of southwest coping stone of culvert 47 (N. Y. 65)	240.345
Schenectady, northwest column of Church Street lift bridge over the Erie Canal; cross cut on southeast corner of foundation stone (N. Y. 67)	232.954

Crescent to Schenectady.[2]

Crescent, near, near center towpath abutment of bridge 38, sixth course, below coping; chiseled cross in circle on projection (Canal 64, N. Y. 41)	191.213
Vischer Ferry, near, towpath abutment of bridge 41, sixth course, below coping, near east angle; cross in circle on face (Canal 68, N. Y. 43)	192.211
Vischer Ferry, near, on face of towpath abutment of bridge 42, near west angle; cross in circle on fifth course, below coping (Canal 69, N. Y. 44)	192.238
Vischer Ferry, near, on bridge 47, first bridge east of lock 19, on towpath abutment, east corner, east wing; cross in circle on top of first stone under coping (Canal 73, N. Y. 47)	193.017
Vischer Ferry, northeast gate of south lock of lock 19; cross in circle on coping near end of anchor, marked "B. M." (Canal 75, N. Y. 48)	198.503
Vischer Ferry, near, southeast gate of north lock of lock 20; point cut in square between ends of anchor (N. Y. 50)	208.413
Fondas Basin, east end wing of berme abutment of bridge 49; cross in circle on top of coping (Canal 80, N. Y. 51)	212.692

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[1] Information furnished by Board on Deep Waterways.

[2] Rept. State Engineer and Surveyor for 1901.

	Feet.
Rexford Flats, at north end of Upper Mohawk aqueduct, on end of towpath wing; cross in circle on northeast corner of coping, marked "B. M." (Canal 86, N. Y. 54)	232.336
Rexford Flats, towpath wing, south end of Upper Mohawk aqueduct, near end of parapet; cross in circle on top dowel in coping of parapet (Canal 87, N. Y. 55)	236.016
Rexford Flats, near, north wing, berme abutment of bridge 51; cross in circle on top of coping, marked "B. M." (Canal 88, N. Y. 56)	235.830
Schenectady, near, on face of towpath abutment of bridge 53, near center; cross in circle on projection of sixth course under coping marked "B. M." (Canal 90, N. Y. 60)	233.191
Schenectady, west wing wall of berme abutment of bridge 54; cross in circle on top of coping, marked "B. M." (Canal 92, N. Y. 62)	233.029
Schenectady, on end of east wing of towpath abutment of bridge 55; cross in circle on top of coping, marked "B. M." (Canal 93, N. Y. 63)	234.536
Schenectady, Jefferson Street, east of towpath abutment of bridge 57; cross in circle on southwest corner of coping of retaining wall, marked "B. M." (Canal 95, N. Y. 66a)	236.460
Schenectady, Liberty Street, west end of bridge approach, towpath abutment of bridge 59; chiseled square on coping of retaining wall (N. Y. 66b)	235.072
Schenectady, opposite Westinghouse Works, west end of parapet, southwest corner of wasteweir; cross in circle on top of coping, marked "B. M." (Canal 97, N. Y. 68)	234.274
Schenectady, towpath at west end of General Electric Works; square cut on northeast corner of coping on culvert 28 (N. Y. 69)	223.237
Schenectady, near, Navoniers Bay, near center, on face of towpath abutment of bridge 63; cross in circle on projection of sixth course, marked "B. M." (Canal 98, N. Y. 70)	231.962
Schenectady, near, on face of towpath abutment of bridge 64, near west angle; cross in circle on projection of sixth course below coping, marked "B. M." (Canal 101, N. Y. 73)	240.257
Schenectady, near, northeast gate of north lock of lock 24; cross in circle on coping between ends of anchor, marked "B. M." (Canal 103, N. Y. 74)	248.027
Schenectady, near, on face near center of towpath abutment of bridge 65; cross in circle on projection of sixth course, marked "B. M." (Canal 104; N. Y. 75)	250.601

AMSTERDAM QUADRANGLE.

Pattersonville to Amsterdam.[1]

Schenectady, 5.6 miles west of, east wing wall of north abutment of bridge 67; square cut on lower step (L. S. 31)	253.629
Pattersonville, east of, southeast wing wall of east abutment of canal bridge next below lock 25; top of projection stone in third course of stones, marked "B. M." (L. S. 32)	250.949

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[1] Information furnished by U. S. Lake Survey.

	Feet.
Pattersonville, 1.8 miles east of, at end of west wing wall of towpath abutment of bridge 71; cross in circle on top of coping, marked " B. M." (L. S. 33; N. Y. 83, 1901)	258.275
Pattersonville, east wing wall of north abutment of bridge 74; square cut on bottom step (L. S. 34)	259.122
Pattersonville, 2.7 miles west of, north abutment of bridge 75, 7.5 inches from west edge of stone and 6 inches from south edge; square cut on step of east wing wall (L. S. 35)	259.261
Amsterdam, 3.5 miles east of, east wing wall of towpath abutment of bridge 76; circle in cross on first stone ledge under coping (N. Y. 88; L. S. 36)	258.492
Amsterdam, 2.8 miles east of, cross in circle on east corner of south wall of north lock 26 (L. S. 21, 1875; L. S. 37)	263.662
Amsterdam, 2.8 miles east of, on northeast gate of north lock of lock 26; cross in circle on top of coping, marked " B. M." (N. Y. 90, 1901; L. S. 38)	263.736
Amsterdam, 2.5 miles east of, northeast gate of north lock of lock 27; square cut on coping between ends of anchor (N. Y. 91, 1901; L. S. 39)	271.680
Amsterdam, west end of towpath abutment of bridge 78; cross in circle on top of lower step, marked " B. M." (N. Y. 93, 1901; L. S. 40)	279.424
Amsterdam, west wing wall of towpath abutment of Market Street Bridge, near center of south edge of step; square cut on bottom of step (L. S. 41)	276.542
Amsterdam, at center pier of Chuctanunda Creek culvert, towpath side; cross in circle on top of coping, marked " B. M." (N. Y. 94, 1901; L. S. 42)	263.649
Amsterdam, 2.8 miles west of, on east wall of space between the two locks; head of iron bolt marked with cross on top of coping (L. S. 24a, 1875; L. S. 43)	279.927

Schenectady to Amsterdam.[1]

Rotterdam, about 2 miles east of, at east corner of Van Slyck homestead, at bridge 66, 700 feet east of Erie Canal aqueduct over Flatstone Creek; square cut on north corner of bottom stone step (N. Y. 76a)	250.738
Rotterdam Junction, about 700 feet east of lock 25 of Erie Canal, 150 feet south of schoolhouse; on north corner of brick house; arrow cut on north corner of projecting course of brick	251.889
Between Rotterdam Junction and Pattersonville, west of center and on north edge of coping on north end of culvert under highway, about 1,600 feet east of railroad bridge over Mohawk River; square cut in coping stone	274.180
Pattersonville, about 300 feet east of West Shore R. R. station, under foot of flight of steps on southwest corner of coal shed, opposite Pattersonville Hotel; square cut on northeast corner of large square stone	271.591

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[1] Information furnished by Board on Deep Waterways.

	Feet.
Amsterdam, near west abutment of West Shore R. R. bridge 238, about 9,000 feet east of bridge over the Mohawk River; square cut on northeast corner	280.600
Amsterdam, northwest abutment of West Shore R. R. bridge 242, crossing Chuctanunda Creek; square cut in top of north corner	279.032

Rotterdam to Amsterdam.[1]

Rotterdam Junction, near, on face near east angle of towpath abutment of bridge 66; cross in circle on projection of sixth course below coping, marked "B. M." (Canal 105; N. Y. 76)	249.169
Rotterdam Junction, near, northeast corner, towpath side of Flat Stone Creek aqueduct; square cut on east end of parapet (N. Y. 77)	252.007
Rotterdam Junction, near, on face of towpath abutment of bridge 67; cross in circle on projection of sixth course below coping, marked "B. M." (Canal 107; N. Y. 78)	250.574
Rotterdam Junction, near, on face, near west angle of towpath abutment of bridge 68; cross in circle on projection of seventh course below coping, marked "B. M." (Canal 108; N. Y. 79)	249.412
Rotterdam Junction, near, near center of face of towpath abutment; cross in circle on projection of seventh course below coping, marked "B. M." (Canal 109; N. Y. 80)	248.140
Pattersonville, near, northeast gate of north lock of lock 25; cross in circle on coping between ends of anchor; marked "B. M." (Canal 111; N. Y. 82)	255.876
Pattersonville, near, on face of towpath abutment near west angle of bridge 72; cross in circle on projection of fourth course below coping, marked "B. M." (Canal 113; N. Y. 84)	259.153
Pattersonville, about 0.8 mile east of, in seventh course of pier of railroad bridge over Erie Canal and Mohawk River; cross in circle on projection of fourth stone from southeast angle, marked "B. M." (N. Y. 85a)	257.461
Pattersonville, near, west wing, berme abutment of bridge 73; on coping (Canal 114; N. Y. 86)	258.501
Pattersonville, near, at east angle (junction of wing with straight wall), of Sansai Kill aqueduct; cross in circle on coping of parapet, marked "B. M." (Canal 115; N. Y. 86)	259.391
Pattersonville, near, on back angle of towpath at west end of second tangent east of bridge 76; cross in circle on flat sandstone, marked "B. M." (Canal 118; N. Y. 87)	254.863
Amsterdam, near, 0.5 mile east of Amsterdam River bridge; northwest corner of wasteweir; square cut on top of east wall (N. Y. 92)	272.022

FONDA QUADRANGLE.

Fort Hunter to Sprakers.[2]

Fort Hunter, 1 mile east of, west wing wall of towpath abutment of bridge 80, first bridge east of lock 29; square cut on coping (D. W. b. m., 1898; L. S. 44)	282.455

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[1] Rept. State Engineer and Surveyor for 1901.
[2] Information furnished by U. S. Lake Survey.

	Feet.
Fort Hunter, south lock of lock 30; square cut on first stone east of junction of old wall and extension of north wall (N. Y. 100a, 1901; L. S. 45)	297.899
Fultonville, 2 miles east of, near east angle of bridge 88, in face of abutment; cross in circle on fourth course of stones below coping (N. Y. 109, 1901; L. S. 46)	300.297
Fultonville, 1.4 miles east of, about 3 feet from corner of first course in west wing wall of north abutment of bridge 90, third bridge east (about 7,000 feet east) of Main Street Bridge; point cut on face of most westerly stone (D. W., 1898; L. S. 47)	298.474
Fultonville, east wing wall of berme abutment of Main Street Bridge, 93; cross in circle cut on second step, marked "B. M." (N. Y. 114, 1901; L. S. 48)	302.048
Fultonville, 1.6 miles west of, in face of abutment, near east angle of bridge 96, in fourth course of stones below coping; cross in circle in a ledge of rock (N. Y. State b. m. 117, 1901; L. S. 49)	299.934
Fultonville, 3 miles west of, face of second stone from west corner of west wing wall of north abutment of bridge 97; square cut on a projecting point on the upper west corner, marked "B. M." (D. W., 1898; L. S. 50)	299.386
Fultonville, 3.2 miles west of, at end of east wing wall of Tokkon Creek aqueduct, towpath side; cross in circle on coping, marked "B. M." (N. Y. 120, 1901; L. S. 51)	297.067
Downing, about 2 miles west of, northeast corner of northwest wing wall of north wall of second Erie Canal aqueduct west of Downing; square cut on coping (D. W., 1898; L. S. 52)	297.241
Sprakers, 2.2 miles east of, in first course of east wing wall of north abutment of first bridge, No. 102, over the Erie Canal, east of lock 31; cross in circle on face of second stone from east end, marked "B. M." (D. W. 1898; L. S. 53)	298.899

Fort Hunter to Sprakers.[1]

Fort Hunter, on Erie Canal aqueduct over Schoharie Creek, west wing, towpath side; square cut at foot of parapet, marked "B. M." (Canal 140; N. Y. 101)	298.957
Auriesville, about 2,000 feet west of West Shore R. R. station; north abutment of bridge 85 over Erie Canal; square cut on west end of west wing wall (N. Y. 106)	302.785
Fultonville, second course in west end of towpath abutment of first bridge over the Erie Canal west of Main Street Bridge; point cut on top of the projection of fourth stone (N. Y. 115)	299.952
Downing, first bridge over the Erie Canal east of, at angle of east wing wall with face of north abutment; square cut on projection of fourth stone below coping on face of towpath abutment, marked "B. M." (Canal 154; N. Y. 121)	299.779
Downing, about 3,300 feet west of station of West Shore R. R., on towpath side of Erie Canal aqueduct over Leonardsons Creek, southeast corner of west wing; square cut on top of coping, marked "B. M." (N. Y. 124)	297.269

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[1] Information furnished by Board on Deep Waterways.

Fort Hunter to Sprakers.[1]

	Feet.
Fort Hunter, near, on face in center of towpath abutment of bridge 80; cross in circle on projection of sixth course below coping (Canal 134; N. Y. 96)	282.446
Fort Hunter, near, northeast gate of north lock of lock 29; cross in circle on coping between ends of anchor, marked "B. M." (Canal 139; N. Y. 98)	287.253
Fort Hunter, near, on face of towpath abutment near east angle of bridge 81; cross in circle on projection of fourth course below coping, marked "B. M." (Canal 137; N. Y. 99)	290.459
Fort Hunter, northeast gate of north lock on coping of lock 30; cross in circle on coping between ends of anchor, marked "B. M." (N. Y. 100)	297.904
Fort Hunter, near, northeast corner of towpath abutment of bridge 83; cross in circle cut on face of corner stone, fifth course, marked "B. M." (N. Y. 102)	302.279
Auriesville, near, cross in circle on top of lower step west wing of berme abutment of bridge 84 (Canal 142)	302.131
Auriesville, on face of towpath abutment, near east angle, of bridge 85, cross in circle on projection of fifth course below coping, marked "B. M." (Canal 143; N. Y. 105)	300.548
Auriesville, near, on face of towpath abutment, near west corner of bridge 86; cross in circle on projection of sixth course below coping, marked "B. M." (Canal 144; N. Y. 107)	300.097
Fultonville, near, on face of towpath abutment, near west angle, of bridge 89; cross in circle on projection of fourth course below coping, marked "B. M." (Canal 146; N. Y. 110)	300.905
Fultonville, near, west wing of berme abutment of bridge 90; cross in circle on top of lower step, marked "B. M." (Canal 147; N. Y. 111)	301.877
Fultonville, near, east berme abutment of bridge 91; cross in circle on top of lower step, marked "B. M." (Canal 148; N. Y. 113)	300.603
Fultonville, at end of east wing of towpath abutment of bridge 95; cross in circle on top of coping, marked "B. M." (Canal 150; N. Y. 116)	301.509
Fultonville, near, end of west wing of towpath abutment of bridge 97; cross in circle on face of top stone, marked "B. M." (Canal 152; N. Y. 119)	300.911
Downing, near, at end of east wing of berme abutment of bridge 99; cross in circle on top of second stone below coping, marked "B. M." (Canal 155; N. Y. 122)	299.596
Downing, near, northeast corner of northeast wing of Leonardson's Creek aqueduct, towpath side; cross in circle on top of coping, marked "B. M." (Canal 156; N. Y. 123)	297.222
West Downing, near, east lock 31, on face of towpath abutment of private road bridge; cross in circle on projection of second course from bottom, near center, marked "B. M." (N. Y. 126)	299.597

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[1] Rept. State Engineer and Surveyor for 1901.

CANAJOHARIE QUADRANGLE.

Sprakers to Indian Castle. [1]

	Feet.
Sprakers, northeast gate of south lock ot lock 31; top of copper bolt leaded vertically, lettered "U. S. C. & G. S." (N. Y. 128, 1901; L. S. 54)	303.825
Sprakers, west wing wall of towpath abutment of Ferry Street Bridge, No. 104; top of iron bolt in coping (L. S. 55)	305.323
Canajoharie, northeast wing wall of Canajoharie Creek aqueduct, towpath side; cross in circle on coping of parapet, marked "B. M." (N. Y. 135, 1901; L. S. 56)	308.146
Canajoharie, south face of stone foundation of old barn near upper footbridge across canal, second course of stones from top; cross cut on corner stone at east corner (L. S. 57; L. S. 31, 1875)	306.461
Fort Plain, 2.4 miles east of, southeast wing wall of northeast abutment of first bridge, No. 113, east of steel skew bridge of West Shore R. R.; point dressed square on the top of east corner of second course of masonry (D. W., 1898; L. S. 58)	307.402
Fort Plain, 0.8 mile east of, on northeast gate of north lock of lock 32; cross in circle on coping between ends of anchor, marked "B. M." (N. Y. 141, 1901; L. S. 59)	312.151
Fort Plain, at end of west wing wall of towpath abutment of bridge 117; cross in circle on top of coping, marked "B. M." (N. Y. 142, 1901; L. S. 60)	314.233
Fort Plain, 0.7 mile west of, near center of face of towpath abutment of West Shore R. R. bridge 278, on second course above ground; cross in circle on ledge of rock, marked "B. M." (N. Y. 144, 1901; L. S. 61)	313.729
St. Johnsville, 1.5 miles east of, southeast wing wall of northeast abutment of first bridge, No. 119, east of lock 33; square cut on south corner of capstone (D. W., 1898; L. S. 62)	313.022
St. Johnsville, near, west of lock 33, on second course of masonry near center of east wing wall of towpath abutment of bridge 120; cross in circle on ledge of rock, marked "B. M." (L. S. 63; L. S. 34, 1875)	319.386
St. Johnsville, east wing wall of towpath abutment of bridge 121, square cut on top of second step, marked "B. M." (N. Y. 153, 1901; L. S. 64)	320.558
Mindenville, about 0.2 mile west of, at lock 34, between ends of anchor of northeast gate of north lock; square cut on coping marked "B. M." (N. Y. 155, 1901; L. S. 65)	325.653
Mindenville, about 1 mile west of, northwest wing of northeast abutment of first bridge above lock 33, Erie Canal; cross in circle on top of projecting point of stone in second course of stones (L. S. 66, 35a)	328.161

Sprakers to Indian Castle. [2]

Sprakers, about 1 mile from, on third bridge, No. 106, over Erie Canal west of Erie Canal aqueduct, first stone from east end of east wing, towpath side; square cut on projection of bottom course (N. Y. 131)	303.546

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[1] Information furnished by U. S. Lake Survey.

[2] Information furnished by Board on Deep Waterways.

	Feet.
Fort Plain, on first bridge over Erie Canal west of River Street Bridge, at end of southeast wing of northeast abutment; square cut on the extreme south corner of southeast capstone (N. Y. 142a)	314.017
Mindenville, on first bridge crossing the Erie Canal east of lock 34, east wing wall of north abutment; square cut on southeast corner of bottom step, marked "B. M." (N. Y. 154)	321.873
Between Mindenville and Indian Castle, on bridge 127 crossing Erie Canal, opposite point where East Canada Creek enters Mohawk River, southeast wing wall of northeast abutment; square on east corner of end stone in third course, marked "B. M." (N. Y. 160)	328.762

Sprakers to Mindenville.[1]

Sprakers, near, on bridge 105, on face of towpath abutment, near west angle on projection; cross in circle on fifth course below coping, marked "B. M." (Canal 162; N. Y. 130)	306.166
Sprakers, near, on bridge 106, on face of towpath abutment near center; sixth course below coping; cross in circle on ledge of rock, marked "B. M." (N. Y. 132)	304.697
Sprakers, near, on bridge 107, on face of towpath abutment, near west angle; seventh course below coping, cross in circle on projection marked "B. M." (Canal 164; N. Y. 133)	303.720
Canajoharie, near, on bridge 108, on face of towpath abutment near center; cross in circle on projection of fourth course below coping, marked "B. M." (Canal 165; N. Y. 134)	304.637
Canajoharie, near, on bridge 111, at end of west wing of towpath abutment; cross in circle on coping, marked "B. M." (Canal 167; N. Y. 137)	307.392
Canajoharie, near, on bridge 112, west wing of berme abutment; cross in circle on rear upper corner of stone under coping, marked "B. M." (Canal 168; N. Y. 138)	306.197
Fort Plain, near, on bridge 113, on face near center of east wing of towpath abutment; cross in circle on projection of second stone above ground (Canal 169; N. Y. 139)	305.587
Fort Plain, near, on bridge 118, on face of towpath abutment; cross in circle on projection of sixth course below coping, marked "B. M." (Canal 174; N. Y. 143)	312.456
Fort Plain, near, near center of towpath; cross in circle on coping of culvert 63, marked "B. M." (Canal 175; N. Y. 145)	307.584
Fort Plain, near, west wing of culvert 65, towpath side; square on top of coping, marked "B. M." (N. Y. 146)	310.532
St. Johnsville, near, east of wing wall, towpath side, of culvert 67; cross in circle on corner of coping, marked "B. M." (Canal 176; N. Y. 147)	309.695
St. Johnsville, near, on bridge 119, on face of towpath abutment, near west angle: cross in circle on projection of sixth course below coping, marked "B. M." (Canal 177; N. Y. 149)	313.290

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
St. Johnsville, near, northeast gate of north lock of lock 33; cross in circle on coping between ends of anchor, marked "B. M." (Canal 179; N. Y. 150)	317.628
St. Johnsville, near, on bridge 120, west wing wall of towpath abutment; chisel mark on face of second course of masonry, marked "B. M." (N. Y. 152; L. S. 34a, 1875)	319.367
St. Johnsville, east wing of towpath abutment of bridge 121; square on top of second step, marked "B. M." (N. Y. 153)	320.715
Mindenville, near, on bridge 124, on face of towpath abutment near west angle; cross in circle on projection of seventh course below coping, marked "B. M." (Canal 185; N. Y. 156)	325.745
Mindenville, near, on bridge 125, east wing of towpath abutment; cross in circle on projection of second course, marked "B. M." (N. Y. 157)	327.594

LITTLE FALLS QUADRANGLE.

Indian Castle to Herkimer.[1]

Indian Castle, east wing wall of aqueduct 12, towpath side; square on capstone, marked "B. M." (D. W., 1898; L. S. 67)	334.925
Indian Castle, 2.6 miles west of, on east side of east wing wall of north abutment of bridge 133 crossing canal at point about 600 feet north of Herkimer Monument; square cut on southeast corner of capstone, marked "B. M." (D. W., 1898; L. S. 68)	336.821
Little Falls, northeast gate of north lock 36; cross in circle on top of iron bolt between ends of anchor (L. S. 69, L. S. 37, 1875)	343.487
Little Falls, northeast gate of north lock of lock 37; cross in circle on coping between ends of anchor (N. Y. 170, 1901; L. S. 70)	353.527
Little Falls, northeast gate of north lock of lock 38; square cut on coping between ends of anchor (N. Y. 171, 1901; L. S. 71)	363.160
Little Falls, northeast gate of north lock of lock 39; cross in circle on coping at ends of anchor (N. Y. 172, 1901; L. S. 72)	373.208
Little Falls, 2.5 miles west of, on first bridge, No. 138, east of lock 40, west wing wall of north abutment; chisel mark on top of coping (L. S. 73; L. S. 38a, 1875)	378.267
Little Falls, 3 miles west of, northeast gate of north lock of lock 40; cross cut on top of end bolt through the north branch of iron collar (D. W., 1898; L. S. 74)	381.081
Little Falls, 5.7 miles west of, northeast gate of north lock of lock 41; cross in circle on top of coping between ends of anchor (N. Y 183, 1901; L. S. 75)	389.170
Herkimer, 1 mile east of, west wing wall of towpath abutment of bridge 143; square cut on coping (L. S. 76; L. S. 39a, 1875)	393.325
Herkimer, east wing wall of towpath abutment of bridge 144, Herkimer road bridge; circle on northeast corner of lower step (N. Y. 186, 1901; L. S. 77)	394.492

Little Falls to Herkimer.[2]

Little Falls, on Bellinger Street Bridge, southwest wing of northwest abutment; chiseled square on south corner of capstone on southwest end (N. Y. 173)	377.505

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[1] Information furnished by U. S. Lake Survey.

[2] Information furnished by Board on Deep Waterways.

	Feet.
Little Falls, near, on second bridge, No. 137, crossing Erie Canal west of Bellinger Street Bridge, east wing of north or towpath abutment; chiseled cross in circle on southeast corner of capstone on east end (Canal 204; N. Y. 175)	377.809
Herkimer, near, east end of east wing wall of north or towpath abutment of second bridge east of lock 41; chiseled square on southeast corner of capstone (N. Y. 182)	384.742
Herkimer, on north abutment of First Street Bridge; cross cut in circle on top of masonry near northeast corner, marked "U. S. D. W. B. M." (N. Y. 187)	388.577

Mindenville to Herkimer.[1]

Mindenville, near, on bridge 126, near center of towpath abutment; cross in circle on projection of seventh course below coping, marked "B. M." (Canal 186; N. Y. 159)	327.812
Indian Castle, near, on bridge 128, on face of towpath abutment near west angle; cross in circle on projection of seventh course below coping, marked "B. M." (Canal 187; N. Y. 161)	326.827
Indian Castle, near, on bridge 129, on face of towpath abutment near center; cross in circle on projection of seventh course below coping, marked "B. M." (Canal 188; N. Y. 162)	326.594
Indian Castle, near, northeast gate of north lock of lock 35; cross in circle on coping betwen ends of anchor, marked "B. M." (Canal 190; N. Y. 163)	333.808
Indian Castle, near, on bridge 131; circle at center of west wing on face of towpath abutment, third course from ground (N. Y. 165)	336.017
Indian Castle, near, on bridge 131, on face of towpath abutment; circle on projection of third course from ground (near center) (N. Y. 166)	336.087
Indian Castle, near, on bridge 132, east wing of berme abutment of farm bridge; chiseled cross in circle on top of coping (Canal 192; N. Y. 167)	338.555
Little Falls, near, east wing of towpath abutment of third bridge west of lock 38; chiseled square on top of lower step (N. Y. 174)	377.207
Little Falls, near, on bridge 138, west wing of berme abutment of farm bridge; chiseled cross in circle on top of coping (Canal 205; N. Y. 176)	378.377
Little Falls, near, northeast gate of north lock of lock 40; chiseled cross in circle on coping at ends of anchor (Canal 207; N. Y. 178)	380.975
Herkimer, near, on bridge 138, east wing of towpath abutment, second bridge west of lock 40; chiseled square on top of lower step (N. Y. 180)	385.284
Herkimer, near, on bridge 140, west wing of towpath abutment of farm bridge; chiseled cross on top of coping (Canal 209; N. Y. 181)	385.003
Herkimer, near, on bridge 143, east wing of towpath abutment of farm bridge; chisel mark on coping (N. Y. 184)	393.320

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[1] Rept. State Engineer and Surveyor for 1901.

UTICA QUADRANGLE.

Mohawk to Utica.[1]

	Feet.
Mohawk, in second course of towpath abutment of West Shore R. R. bridge over the canal; cross in circle on projection of fourteenth stone from west end (N. Y. 189, 1900; L. S. 78)	393.129
Mohawk, 0.5 mile west of, northeast gate of towpath lock of lock 42; square cut on coping between ends of anchor (N. Y. 191, 1900; L. S. 79)	398.412
Mohawk, 0.8 mile west of; cross in circle on northeast corner of towpath parapet wall of Fulmer Creek aqueduct (N. Y. 193, 1900; L. S. 80)	407.998
Ilion, towpath abutment of Typewriters Bridge; circle in a square cut on southwest corner of west wing wall (N. Y. 195, 1900; L. S. 81)	409.283
Ilion, cross in circle on west corner of coping of Steel Creek aqueduct, towpath side (N. Y. 197, 1900; L. S. 82)	408.547
Ilion, 1.1 miles west of, northeast gate, towpath lock of lock 44; square cut on coping between ends of anchor (N. Y. 200, 1900; L. S. 83)	417.453
Frankfort, towpath lock of lock 45, towpath side, 2 feet east of east hollow quoin; cross in circle on coping (N. Y. 204, 1900; L. S. 84)	427.326
Frankfort, southeast corner of northeast abutment of bridge next below lock 45; circle on top of projection of stone in bottom course of stones (L. S. 41, 1875; L. S. 85)	418.713
Frankfort, 2.6 miles west of, west wing wall of north abutment of bridge 164; square cut on southwest corner of lower step (L. S. 86)	432.339
Utica, 3.2 miles east of, on extreme east end of parapet wall of Ferguson Creek Aqueduct; cross in circle on southeast corner of coping stone (N. Y. 215, 1900; L. S. 87)	427.678
Utica, 2.1 miles east of, east wing wall of towpath abutment of Green's road bridge at Herkimer-Oneida County line; top of copper bolt in southeast corner of lower step (N. Y. 217, 1900; L. S. 88)	431.332
Utica, west end of towpath abutment of Broad Street lift bridge; top of copper bolt in southwest corner (N. Y. 210, 1900; L. S. 89)	431.537
Utica, western stairway of Broadway Street footbridge; top of copper bolt in southwest corner of stone forming foundation (N. Y. 221, 1900; L. S. 90)	427.712
Utica, west end of towpath abutment of Whitesboro Street lift bridge; top of copper bolt in southwest corner (N. Y. 222, 1900; L. S. 91)	431.637
Utica, towpath lock of lock 46; copper bolt between ends of anchor of northeast gate (N. Y. 223, 1900; L. S. 92)	430.410
Utica, 1.9 miles west of, east wing wall of towpath abutment of Whitesboro road bridge at west boundary of city of Utica; top of copper bolt in lower step (N. Y. 225, 1900; L. S. 93)	435.710

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[1] Information furnished by U. S. Lake Survey.

Ilion to Utica.[1]

	Feet.
Ilion, northwest corner of culvert at southwest wing wall of south highway bridge over Mohawk River; top of covering stone of masonry	386.579
Frankfort, at West Shore R. R. roundhouse; top of northwest corner of water table	401.786
Between Utica and Frankfort, about 500 feet southeast of milepost 209 from Buffalo, on New York Central & Hudson River R. R.; copper nail in root of wild-cherry tree	408.459
Between Utica and Frankfort, 200 feet east of culvert 496, about 50 feet north of north rail of the New York Central & Hudson River R. R.; copper nail in root of tree	396.938
Utica, near, about 830 feet northeast of north end of railroad bridge over Mohawk River, about 50 feet north of north bank of Mohawk River, on Black River branch of New York Central & Hudson River R. R.; copper nail in root of elm tree	405.083

Mohawk to Utica.[2]

Mohawk, near, third stone from west end, lower course, towpath abutment of street railroad bridge between Herkimer and Mohawk; cut in small shelf (N. Y. 188)	392.311
Mohawk, Mohawk canal bridge, west wing of berme abutment; cross cut in circle on northwest corner of lower step (N. Y. 190)	392.885
Mohawk, northeast gate of lock 43; square cut on coping between ends of anchor (N. Y. 192)	406.414
Mohawk, west wing of towpath abutment of Meyer's farm bridge; circle cut in square on southwest corner of lower step (N. Y. 194)	410.285
Ilion, northeast stair landing near post of Railroad Street lift bridge: circle cut in square on southeast corner of top foundation stone (N. Y. 196)	408.609
Ilion, west wing of towpath abutment of London Bridge; circle cut in square on southwest corner of lower step (N. Y. 198)	410.318
Ilion, near, east wing of towpath abutment of street railway bridge between Ilion and Frankfort; cross cut in circle on northeast corner of second step (N. Y. 199)	409.217
Ilion, near, west wing of towpath abutment of bridge, 650 feet west of lock 44, Erie Canal; circle cut in square on southwest corner of lower step (N. Y. 201)	420.336
Frankfort, near, west wing of towpath abutment of Reese's road bridge; circle cut in square on southwest corner of lower step (N. Y. 202)	422.486
Frankfort, about 0.8 mile west of, east wing of towpath abutment of Beehive Bridge; circle cut in square on southeast corner of lower step (N. Y. 205)	430.461
Frankfort, near, east wing of towpath abutment of bridge 161 next west of Beehive Bridge; cross cut in circle on southeast corner of second step (N. Y. 206)	430.815

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[1] Information furnished by Board on Deep Waterways.
[2] Rept. State Engineer and Surveyor for 1901.

	Feet.
Frankfort, towpath abutment of Center Bridge; circle cut in projection on the face of fifth stone from west end in second course (N. Y. 207)	429.446
Frankfort, near, west wing of towpath abutment of Bargy's farm bridge, 5 miles east of Herkimer-Oneida County line; circle cut on southwest corner of lower step (N. Y. 208)	431.165
Frankfort, near, west wing of towpath abutment of farm bridge 164, 4.4 miles east of Herkimer-Oneida County line; circle cut in southwest corner of lower step (N. Y. 209)	430.973
Utica, near, near west angle of towpath abutment of farm bridge 165, 4 miles east of Herkimer-Oneida County line; cross cut in a circle on face of stone (N. Y. 210)	430.072
Utica, near, second course of towpath abutment of farm bridge 163, 3 miles east of Herkimer-Oneida County line; circle cut on the first stone west of east angle (N. Y. 211)	429.565
Utica, near, west angle of towpath abutment of farm bridge 167, 3.7 miles east of Herkimer-Oneida County line; cross cut in circle on projection of first stone in second course (N. Y. 212)	428.534
Utica, near, on face of first stone west of east angle, towpath abutment of farm bridge 168, 2.2 miles east of Herkimer-Oneida County line; cross cut in a circle on projection in second course (N. Y. 13)	431.044
Utica, near, towpath abutment of harbor bridge 169, on face of second stone from east angle; circle cut in a square on a projection in second course (N. Y. 214)	429.772
Utica, near, east wing of towpath abutment of first bridge east of Herkimer-Oneida County line; cross cut in a circle on southeast corner of lower step (N. Y. 216)	430.148
Utica, east wing of towpath abutment of Platt Street Bridge; copper bolt in bottom step (N. Y. 224)	434.127

ORISKANY QUADRANGLE.

Utica to Rome.[1]

Whitesboro, east wing wall of towpath abutment of Clinton Street Bridge; top of copper plug in southeast corner of bottom step (N. Y. 228, 1900; L. S. 94)	433.688
Whitesboro, east wing wall of towpath abutment of Westmoreland Street Bridge; top of copper plug in bottom step (N. Y. 229, 1900; L. S. 95)	434.967
Oriskany, 1.8 miles east of, east wing wall of towpath abutment of Bradley's road bridge; top of copper bolt in southwest corner of bottom step (N. Y. 230, 1900; L. S. 96)	436.553
Oriskany, west end of towpath coping of Oriskany aqueduct; top of copper plug in southwest corner of stone (N. Y. 232, 1900; L. S. 97)	433.960
Oriskany, 1 mile west of, west wing of towpath abutment of Brainard's farm bridge; top of copper plug in southwest corner of bottom step (N. Y. 233, 1900; L. S. 98)	435.793

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[1] Information furnished by U. S. Lake Survey.

	Feet.
Oriskany, 4.2 miles west of, wasteweir 2, just below bridge 31; top of copper plug on northwest corner of east stone parapet (L. S. 99)	433.106
Stanwix, east wing wall of towpath abutment of Stanwix road bridge, top of copper plug in southeast corner of bottom step (N. Y. 237, 1900; L. S. 100)	437.626
Rome, Black River feeder to Erie Canal, 100 feet west of center of Depeyster Street Bridge over canal; Whitesboro Street crosses feeder by an arch marked " S. W. Morton, contractor, 1851;" top of copper bolt in northeast corner of east wall (L. S. 101)	433.505
Rome, west end of north abutment of George Street Bridge; square cut in southwest corner of lower step, marked " B. M." (L. S. 102)	436.090
Rome, 1.1 miles west of, east wing wall of towpath abutment of Barnes's farm bridge; top of copper bolt in bottom step (N. Y. 239, 1900; L. S. 103)	435.266
Rome, 2.7 miles west of, on west end of parapet of Fort Bull wasteweir; top of copper bolt in southeast corner of end stone (L. S. 104)	433.124

Oriskany to Rome.[1]

Oriskany, about 1.8 miles west of New York Central & Hudson River R. R. station; top of southwest corner stone foundation of milepost 194 from Buffalo	421.587
Between Rome and Oriskany, bridge 538 of the New York Central & Hudson River R. R.; point on masonry above bridge seat on top of southwest corner of east abutment of bridge 538, about 1 foot below top of rail	428.039
Rome, 20 feet east of east line of Lawrence Street, about 900 feet north, measured along street from center of bridge crossing old Erie Canal; copper nail in root of elm tree	431.790
Rome, about 1 mile west of, about 1 foot below top of rail of bridge of the Rome, Watertown & Ogdensburg R. R. crossing highway, near beet sugar company's buildings; top of southeast corner of masonry	432.747

Utica to Rome.[2]

Utica, near, west wing of towpath abutment of Yorkville road bridge; copper bolt in lower step (N. Y. 226)	435.600
Whitesboro, near, Saquoit Creek aqueduct; copper bolt in second stone from northeast end of towpath parapet wall (N. Y. 227)	433.520
Oriskany, near, east wing of towpath abutment of Evans farm bridge, just east of Oriskany; copper bolt in southeast corner of bottom step (N. Y. 231)	436.142
Oriskany, 1.8 miles west of, west wing of towpath abutment of Kieley's farm bridge; copper bolt in southwest corner of bottom step (N. Y. 234)	435.044

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[1] Information furnished by Board on Deep Waterways.
[2] Rept. State Engineer and Surveyor for 1901.

	Feet.
Oriskany, 3 miles west of, east wing of towpath abutment of Murphy's farm bridge; copper bolt in southeast corner of bottom step (N. Y. 235)	434.937
Oriskany, 4.5 miles west of, west wing of towpath abutment of Clark's farm bridge; copper bolt in southwest corner of bottom step (N. Y. 236)	436.074
Rome, near west end of towpath abutment of George Street Bridge on face of stone; knob cut on projection in lower course west end (N. Y. 238)	432.509
Rome, near, west wing, third course, towpath abutment of Brainard's farm bridge, just east of Fort Bull wasteweir; knob cut on face of first stone (N. Y. 240)	434.915

Rome to Delta and Westernville. (portion of line).[1]

Rome, in coping on vertical wall, towpath side, about 42 feet east of east abutment of bridge over mouth of Black River Canal; copper plug (237–B)	435.606
Lock 4, head of, in north stone of towpath wall; copper plug (1)	467.653
Lock 5, towpath side, in coping between anchor irons of upper hollow quoin; copper plug (2)	477.775
Lock 6, towpath side, in coping, between anchor irons of upper hollow quoin; copper plug (3)	487.714
Lock 7, towpath side, in coping between anchor irons of upper hollow quoin; copper plug (5)	497.991

Oriskany to Northwood (portion of line).

Oriskany Creek aqueduct; copper plug (232)	433.960
Mohawk River, in extreme end of west wing wall of south abutment of iron bridge over, 4 feet from 10-inch elm tree; copper plug marked, above, " B. C."; below, " B. M." (2)	417.613
Ninemile Creek, in extreme end of west wing wall of south abutment of iron bridge over; copper plug marked " B. C." above, " B. M." below (5)	428.228
Ninemile Creek, south abutment of bridge near sawmill, in west wing wall; copper plug marked " B. C." above, " B. M." below (7)	437.632
Oriskany, about 4 miles north of, in end of west wing wall of south abutment of steel bridge over Ninemile Creek (bridge is known as "Gristmill Bridge"); copper plug marked " B. C." above, " B. M." below (11)	474.331
Stittville, 1.8 miles southwest of, about 400 feet northwest of residence of John N. Powell, in bridge seat of south abutment of steel bridge over Ninemile Creek; copper plug (14)	503.620
Stittville, in village, in south end of east abutment of steel bridge over Ninemile Creek; copper plug (18)	529.169
Stittville, 3,000 feet northeast of station, in east end of south abutment of Rome, Watertown & Ogdensburg R. R. bridge over Ninemile Creek on fourth course from top; copper plug (19)	554.520

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[1] Information furnished by State Engineer and Surveyor; Barge Canal Survey 1905.

	Feet.
Holland Patent, about 1 mile south of, 500 feet southeast of the John Miller sawmill, in bridge seat stone on south end of west abutment of highway bridge over Ninemile Creek; copper plug (20)	558.933
Holland Patent, 1,000 feet from station, at extreme end of east wing of south abutment of steel bridge over Ninemile Creek; copper plug (21)	582.771
Holland Patent, 3,000 feet southeast of station, in top of stone of east abutment of highway bridge over Beaver Creek, 3 feet from east end of north truss; copper plug (22)	602.864

BOONVILLE QUADRANGLE.

Rome to Delta and Westernville (portion [1]

Lock 8, in coping between anchor irons of upper hollow quoin, berme side; copper plug (6)	509.250
Lock 12, towpath side, in coping between anchor irons of upper hollow quoin; copper plug (7)	554.031
Lock 13, berme side, in coping between anchor irons of upper hollow quoin; copper plug (8)	561.450
Lock 14, towpath side, between anchor irons of lower hollow quoin; copper plug (9)	569.891
Lock 15, berme side, between anchor irons of upper hollow quoin; copper plug (10)	577.699
Lock 16, towpath side, between anchor irons of lower hollow quoin; copper plug (11)	587.622

REMSEN QUADRANGLE.

Oriskany to Northwood (portion of line).

Mason Potter house, about 0.25 mile east of, in large granite bowlder (3 feet 6 inches) on south bank of Beaver Creek, in open pasture; copper plug (27)	648.683
Holland Patent, about 3 miles east of, 100 feet south of Beaver Creek, about 200 feet west of mill of David D. King, in an open pasture, in bowlder; copper plug (28)	702.447
Trenton Falls, 1.25 miles southwest of, in south end of west abutment of highway bridge over Cincinnati Creek; copper plug (35)	749.961
Trenton Falls, 150 feet east of post office, in south end of west abutment of highway bridge over West Canada Creek; copper plug (38)	756.509
Trenton Falls, in east end of bottom step of front steps of Hotel Trenton; iron plate (39)	855.517
Trenton Chasm, 125 feet east of station, in south end of west abutment of Rome, Watertown & Ogdensburg R. R. bridge over West Canada Creek; copper plug (40)	1,033.594
Prospect, about 0.5 mile east of, in north end of top course of stone east abutment of cattle pass under Hinckley Branch of New York Central & Hudson River R. R.; copper plug (44)	1,177.917

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[1] Information furnished by State Engineer and Surveyor; Barge Canal Survey 1905.

	Feet.
Prospect, about 1 mile east of, in southeast corner of north parapet of culvert under Hinckley Branch of New York Central & Hudson River R. R.; copper plug (45)	1,174.731
Hinckley, 2.5 miles northeast of, 10 feet from angle in abutment and 20 feet from end of wing, in east wing of south abutment of "Twin Rock Bridge" over West Canada Creek; copper plug marked "B. C." above, "B. M." below (51)	1,177.552
Northwood, in north end of east abutment of highway bridge over Mill Dam Creek; copper plug (bench mark No. 55)	1,207.401
Northwood, 150 feet east of Hiawatha Hotel, in 12 foot by 8 foot bowlder in open field; copper plug marked "B. C." above, "B. M." below (56)	1,218.436
Northwood, 2.6 miles east of, on west side of highway, 600 feet southwest of Leland property, on line dividing towns of Russia and Ohio, in bowlder; copper plug (59) U. S. Geological Survey bench mark	1,257.696

Twin Rock Bridge to Grant.

Black Creek, 1,200 feet west of, about 250 feet south of east-west fence between foot of slope and edge of swamp, about 0.5 mile northwest of Grant, in bowlder; copper plug (60)	1,233.280
Grant, in northeast wing wall of bridge over Black Creek; copper plug (61)	1,226.713

ONEIDA QUADRANGLE.

Rome to North Bay.[1]

Rome, 4.8 miles west of, west wing wall of towpath abutment of Armstrong's farm bridge; top of copper bolt in lower step (N. Y. 241, 1900; L. S. 105)	435.391
New London, east wing wall of towpath abutment of New London road bridge; top of copper bolt in bottom step (N. Y. 243, 1900; L. S. 106)	435.338
Stacys Basin, towpath abutment of bridge 49; top of copper bolt in lower step of east wing wall (N. Y. 245, 1901; L. S. 107)	435.646
Stacys Basin, on bridge 49, second course of stones, east wing of north abutment; top of projection of stone (L. S. 49, 1875; L. S. 108)	433.868
Higginsville, 1 mile east of, on bridge 50, bottom course, east wing of north abutment; top of projection of stone (L. S. 51, 1875; L. S. 109)	431.050
Higginsville, east wing wall of towpath abutment of east road bridge 51; top of copper bolt in second step (N. Y. 247, 1901; L. S. 110)	433.274
Higginsville, 2.4 miles west of, along old side cut to Oneida Lake on fence line on south side of road, about 2,000 feet west of intersection of roads; nail in root of 2-foot maple tree, largest tree in the vicinity (L. S. 111)	375.277
Sylvan Junction, New York, Ontario & Western Ry. bridge over Fish Creek, square cut on top of east end of south abutment, marked "U. S. B. M." (L. S. 112)	377.016

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[1] Information furnished by U. S. Lake Survey.

Rome to Sylvan Beach.[1]

	Feet.
Between New London and Rome, on south side of angle in highway, about 550 feet east along highway from east side of house of Mark Thron; copper nail in root of elm tree	420.897
New London, about 75 feet south of intersection of highways, about 1,050 feet south of highway bridge crossing Wood Creek; copper nail in root of large elm tree in highway	408.241
Between Sylvan Beach and New London, about 800 feet east of Drum Creek, about 500 feet west of east line of W. Warner property; copper nail in south root of small tree in south corner of woods	381.515
Sylvan Beach, about 0.5 mile east of, about 10 feet east of east right-of-way line of New York, Ontario & Western Ry., about 1,030 feet southwest, along railroad, from south end of railroad bridge crossing Fish Creek; copper nail in root of tree	373.857

New London to Canastota [2]

New London, near, towpath abutment of Sands farm bridge; knob cut on face of stone in second course (N. Y. 242)	432.693
New London, near, berme supports of Grove Spring road bridge; copper bolt in west end of foundation stone (N. Y. 244)	429.490
Stacys Basin, near, on bridge 50, Happy Valley road bridge; west wing of towpath abutment; copper bolt in lower step (N. Y. 246)	435.423
Higginsville, on bridge 52, west road bridge, west wing of towpath abutment; square cut on fourth step (N. Y. 248)	434.018
Higginsville, first culvert west of bridge 52, towpath side; square cut on northeast corner of parapet (N. Y. 249)	428.070
Higginsville, near, on bridge 53, Dunbarton bridge, east wing of towpath abutment; copper bolt in step flush with ground (N. Y. 250)	431.891
Higginsville, near, on culvert 30, towpath side; square cut on northeast corner of coping (N. Y. 251)	428.420
Higginsville, near, on culvert 31; towpath side; square cut on northeast corner of coping (N. Y. 252)	428.497
Higginsville, near, on bridge 54, Durkee's road bridge, east wing of towpath abutment; copper bolt in third step (N. Y. 253)	432.510
Higginsville, near, on bridge 55, State road bridge, east wing of towpath abutment; copper bolt in second step (N. Y. 254)	432.579
Higginsville, near, just east of bridge, towpath side; square cut on northeast corner of coping of culvert (N. Y. 255)	428.089
Durhamville, near, on culvert 34, east end of parapet coping, towpath side; copper plug in northeast corner (N. Y. 256)	428.506
Durhamville, near, on bridge 56, east road bridge, west wing of towpath abutment; copper bolt in third step (N. Y. 257)	423.716
Durhamville, on bridge 57, Main Street Bridge, east wing of towpath abutment; copper bolt in third step (N. Y. 258)	432.594
Durhamville, on wasteweir 4, north end of coping of west abutment; square cut on southeast corner of stone (N. Y. 259)	431.396

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[1] Information furnished by Board on Deep Waterways.
[2] Rept. State Engineer and Surveyor for 1901.

	Feet.
Durhamville, on bridge 58, Bennett's road bridge; west wing of towpath abutment; copper bolt in lower step (N. Y. 260)	433.073
Durhamville, near, on bridge 59, Sholhamer's road bridge, east wing of berme abutment; copper bolt in second step (N. Y. 261)	434.134
Durhamville, near, on Cowasselon Aqueduct 3, east wing of towpath side; copper bolt near center of east face of coping of buttress (N. Y. 262)	430.169
Canastota, near, on bridge 60, Lenox basin road bridge, west wing of towpath abutment; copper bolt in second step (N. Y. 263)	432.000

CHITTENANGO QUADRANGLE.

North Bay to Constantia.[1]

North Bay, in northeast corner of Sautell's field, about 400 feet west of station, about 60 feet south of New York, Ontario & Western Ry. track; nail in root on north side of a 14-inch maple tree (L. S. 113)	387.214
North Bay, 1.7 miles west of, on north side of highway, in front of ruins of John Kinney's house, 70 feet northeast of northeast corner of barn on south side of road, 161 feet east of large willow tree; top of a ⅜-inch brass bolt leaded vertically in triangular stone buried 2.7 feet below ground (L. S. 114)	422.119
Cleveland, at center of intersection of Bridge and North streets, 120 feet east of center of bridge over Black Creek, 37.5 feet north of fence on south side of Bridge Street, 172 feet south of southwest corner of St. James Episcopal Church, 71.2 feet south of hydrant on west side of North Street; top of a ⅜-inch brass bolt leaded vertically in a footstone buried 2½ feet below surface of ground (L. S. 115)	394.763
Cleveland, 100 feet west of second highway crossing the New York, Ontario & Western Ry., west of railroad siding, 540 feet west of milepost marked "N. Y. 285"; top of copper nail in root of maple tree 2½ feet in diameter (D. W., 1898; L. S. 116)	423.007
Bernards Bay, on north side of road opposite J. Richardson's blacksmith shop, 15 feet north of center of road, 26 feet west of east line of foundation of C. Winn's burned store, 148 feet east of center of bridge over small brook west of blacksmith shop, 79 feet southwest of Sarah Jane Mickle's house on north side of road; top of a ⅜-inch brass bolt leaded vertically into a footstone buried 2½ feet under surface of ground (L. S. 117)	386.625
Constantina, 4.8 feet north of north rail of track, in corner of stone coping at north end of west abutment of culvert 395, just east of New York, Ontario & Western Ry. station, over second creek east of station; top of a ⅜-inch brass bolt leaded vertically and marked "U. S. B. M." R. (L. S. 118)	393.675

Bench mark near North Bay.

North Bay, near, 12½ feet north of north right-of-way line of New York, Ontario & Western Ry., 1,185 feet east of milepost 279; copper nail in root of oak tree 2 feet in diameter (D. W., North Bay)	421.971

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[1] Information furnished by U. S. Lake Survey.

Canastota to Manlius.[1]

	Feet.
Canastota, near, over face of east wing of towpath abutment of culvert 38; copper bolt on coping of parapet (N. Y. 264)	428.037
Canastota, on Lehigh Valley R. R. bridge, towpath abutment, near center; point cut on projection of third course of masonry above ground (N. Y. 265)	432.266
Canastota, on bridge 61, Peterboro Street Bridge, berme vertical wall of west side of bridge; chisel mark on coping at foot of step (N. Y. 266)	430.354
Canastota, east wing of towpath abutment of Main Street Bridge, No. 62; copper bolt in third step (N. Y. 267)	433.000
Canastota, on culvert at cider mill, towpath side; copper bolt in northeast corner coping of parapet (N. Y. 268)	429.219
Canastota, near, east wing of towpath abutment of bridge 63, Beebe's road bridge; copper bolt in fourth step (N. Y. 269)	432.971
Canastota, near, east wing of towpath abutment of Herrick's road bridge, No. 64; square cut on fourth step (N. Y. 270)	433.225
Canastota, near, on culvert 43, towpath side, at Fuller's bridge; copper bolt in northwest corner of coping of parapet (N. Y. 271)	428.794
Canastota, near east wing of towpath abutment of New Boston road bridge, No. 66; copper bolt in fourth step (N. Y. 272)	433.320
Canaseraga, near, on culvert 44, towpath side; square cut on northwest corner of coping of parapet (N. Y. 273)	427.975
Canaseraga, near, east wing of towpath abutment of Canaseraga road bridge, No. 67; copper bolt in fourth step (N. Y. 274)	433.425
Chittenango, near, east wing of towpath abutment of Chittenango road bridge, No. 68; square cut on second step (N. Y. 275)	432.413
Chittenango, west wing of towpath side of Chittenango Aqueduct No. 4; copper bolt in stone under coping of parapet (N. Y. 276)	432.721
Chittenango, near, on culvert 45, towpath side; square cut on northeast corner of coping of parapet (N. Y. 277)	428.161
Chittenango, near, west wing of towpath abutment of Bolivar road bridge, No. 69; copper plug in stone under coping of buttress (N. Y. 278)	434.001
Chittenango, near, east wing of towpath abutment of White's road bridge, No. 70; copper bolt in coping of buttress (N. Y. 279)	435.278
Kirkville, near, east wing of towpath abutment of Pools Brook road bridge, No. 71; copper bolt in coping buttress (N. Y. 280)	434.993
Kirkville, near, east wing of towpath abutment of Kirkville road bridge, No. 72; copper bolt in coping of buttress (N. Y. 281)	435.479
Manlius, near, on culvert 47; copper bolt in northeast corner coping of towpath parapet (N. Y. 282)	426.103
Manlius, near, on culvert 48; copper bolt in northeast corner coping of towpath parapet (N. Y. 283)	420.569
Manlius, east wing of berme abutment of Manlius road bridge, No. 73; copper bolt in lower step (N. Y. 284)	433.188

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[1] Rept. State Engineer and Surveyor for 1901.

Chittenango to Cazenovia (portion of line).[1]

	Feet.
Chittenango road bridge, No. 68, square cut on second step, east wing of towpath abutment (68) Coast and Geodetic Survey bench mark	432.413
Chittenango Village, about 1.1 miles south of south corporation line of, in south end of west abutment of highway bridge over Chittenango Creek opposite the E. C. Walrath property; copper plug (1)	500.437

CAZENOVIA QUADRANGLE.

Chittenango to Cazenovia (portion of line).[1]

Chittenango Falls, about 1.2 miles north of, in north end of watering trough on east side of highway; copper plug (8)	672.640
Chittenango Falls, 2,000 feet north of store, in large flat rock at edge of highway, south side, at beginning of first sharp curve in highway; copper plug (10)	845.872
Cazenovia, 2.8 miles north of, 350 feet northeast of Bingleys Mill, point in square on rock at end of north wing of west abutment of highway bridge over Chittenango Creek (12)	1,006.581
Cazenovia, about 2.25 miles north of, 0.5 mile south of Bingleys Mill, 3 feet from north truss, in north wing of east abutment of highway bridge over Chittenango Creek; copper plug (13)	1,057.090
Cazenovia, 900 feet south of Lehigh Valley R. R. station, in west end of north abutment of Lehigh Valley R. R. bridge over Chittenango Creek; iron plug projecting 3 inches above stone (15)	1,187.713
Cazenovia, in west end of extreme north wall of spillway of dam near the mill of A. H. Chappe at south end of Mill Street; copper plug (16)	1,194.921
Cazenovia, in east wing of north abutment at Forman Street bridge over outlet to Owahgena Lake; copper plug (17)	1,197.857

SYRACUSE QUADRANGLE.

Bench mark at Brewerton.

Brewerton, on north bank of Oneida River, about 0.5 mile east of highway bridge, about 150 feet southeast of house of Dr. Oberlander; copper nail in root of elm tree (D. W. Brewerton)	373.026

Manlius to Belle Isle.[2]

Dewitt, near, on bridge 74, Stearn's farm bridge, east wing of berme abutment; square cut on lower step (N. Y. 285)	434.737
Dewitt, near, on Limestone Creek aqueduct, southwest corner of parapet coping, west wing of towpath side; copper bolt (N.Y. 286)	434.207
Dewitt, near, on Burdick's road bridge 76, east wing of towpath abutment; square cut on coping of buttress (N. Y. 287)	435.432
Dewitt, near, on culvert 49, towpath side; square cut on northeast corner of coping of parapet (N. Y. 288)	428.445

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[1] Information furnished by State Engineer and Surveyor; Barge Canal Survey, 1905.

[2] Rept. State Engineer and Surveyor for 1901.

	Feet.
Dewitt, near, on Butternut Creek aqueduct, east stone of east wing of towpath side; copper bolt in coping of parapet (N. Y. 289).	433.949
Syracuse, near, on Thompsons Landing road bridge, towpath side; copper bolt in coping of west buttress (N. Y. 290)	433.542
Syracuse, near, on private bridge, east wing, towpath side; point cut on second step (N. Y. 291)	431.710
Syracuse, near, 0.5 mile east of lock 47, west end of coping, towpath side; copper bolt on stop gate (N. Y. 292)	430.088
Syracuse, on lock 47, towpath lock; copper bolt on southeast hollow quoin (N. Y. 293)	430.618
Syracuse, on lock 48, towpath lock; copper bolt on southeast hollow quoin (N. Y. 294)	420.016
Syracuse, on bridge 80 (William Street Bridge), east wing of towpath abutment; copper bolt in third step (N. Y. 295)	412.707
Syracuse, on Catharine Street Bridge, No. 81, west of bridge, towpath side; square cut on seat on vertical wall (N. Y. 296)	411.648
Syracuse, on lock 49, towpath lock; copper bolt in southeast hollow quoin (N. Y. 297)	409.718
Syracuse, on bridge 82, Orange Street, east wing of towpath abutment; square cut on second step (N. Y. 298)	408.465
Syracuse, on Grape Street Bridge, No. 88, west wing of towpath abutment; copper bolt in third step (N. Y. 299)	405.099
Syracuse, on weighlock; copper bolt in northeast hollow quoin (N. Y. 300)	402.898
Syracuse, at weighlock, entrance to collector's office; set in door-sill; bronze tablet (U. S. G. S. b. m.)	404.320
Syracuse, on Salina Street Bridge, No. 86, towpath side; square cut southwest corner, on belting of abutment (N. Y. 302)	406.605
Syracuse, on Clinton Street Bridge, No. 87, on towpath side; square cut on northwest corner of east foundation stone to stairway (N. Y. 303)	405.250
Syracuse, on West Street Bridge, No. 89, northeast corner of lift tower; copper bolt in capstone (N. Y. 304)	405.558
Syracuse, on Geddes Street Bridge, No. 90, pier at foot of west towpath stairs, at southwest corner of stairway landing; copper bolt (U. S. G. S. b. m.)	406.230
Syracuse, on New York Central R. R. bridge, over Genesee Street Bridge, south wing of west abutment; square cut on first step (N. Y. 306)	403.680
Syracuse, on Bridge Street Bridge, No. 93, west wing of towpath abutment; square cut on stone under coping (N. Y. 307)	406.691
Syracuse, near, on discharge well, near salt company's bridge; copper bolt in southwest corner stone coping (N. Y. 308)	404.048
Syracuse, near, on Blast Furnace road bridge, No. 93, west wing of towpath abutment; square cut on coping at buttress (N. Y. 309)	407.838
Syracuse, near, on Gere's Landing Bridge, No. 94, west wing of towpath abutment; copper bolt in coping buttress (N. Y. 310) ..	407.373
Syracuse, near, on culvert about 700 feet east of lock 50, towpath side; square cut on northeast corner of parapet coping (N. Y. 311)	397.839

	Feet.
Syracuse, near, on lock 50, towpath lock; copper bolt in southeast hollow quoin between anchors (N. Y. 312)	410.614

Syracuse to point near Liverpool.[1]

Syracuse, on Willow Street Bridge, south wing of towpath abutment; copper bolt in third step (N. Y. 1)	406.812
Syracuse, on Division Street Bridge, south wing of towpath abutment; copper bolt in third step (N. Y. 2)	405.028
Syracuse, on Bear Street Bridge, south wing of towpath abutment; copper bolt in first step (N. Y. 3)	404.130
Syracuse, near, on lock 1; copper bolt in northeast lower berme hollow quoin (N. Y. 4)	403.001
Syracuse, near, on lock 2; copper bolt in southeast upper towpath hollow quoin (N. Y. 5)	391.978
Syracuse, near, on lock 3; copper bolt in northeast lower towpath hollow quoin (N. Y. 6)	380.796
Syracuse, near, on change bridge, north wing of west abutment; square cut on coping buttress (N. Y. 7)	373.298
Syracuse, near, on change bridge, north wing of east abutment, copper bolt in west side of coping (N. Y. 8)	373.738
Syracuse, near, on Rome, Watertown & Ogdensburg R. R. bridge, south wing of towpath abutment; square cut on coping of buttress (N. Y. 9)	371.838
Liverpool, near, on culvert, towpath side; square cut on northwest capstone (N. Y. 10)	365.440

Fayetteville to Manlius.[2]

Limestone Creek Aqueduct, in southwest corner of parapet coping, west wing, towpath side; copper plug (286)	434.207
Erie Canal feeder, in east end of north abutment of bridge from towpath into Fayetteville; copper plug (1)	433.784
Fayetteville, 100 feet east of corner of Genesee and High Bridge streets, between footbridge and trolley bridge, in west end of south abutment of bridge over Limestone Creek; copper plug (2)	435.468
Fayetteville, about 1.3 miles south of, 18 feet from west end of north wall of "High Bridge;" copper plug (4)	507.097
Manlius, about 0.5 mile west of, in south end of west abutment of highway bridge over West Branch of Limestone Creek; copper plug (6)	549.162

BALDWINSVILLE QUADRANGLE.

Belle Isle to Jordan[1]

Belle Isle, near, on Gere's road bridge, No. 95, east wing of towpath abutment; copper bolt in lower step (N. Y. 313)	415.957
Belle Isle, on bridge 95, west wing of towpath abutment; copper bolt in lower step (N. Y. 314)	415.925
Amboy, near, on first culvert east of Amboy road bridge, towpath side; copper bolt in west end of parapet coping (N. Y. 315)	406.939

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[1] Rept. State Engineer and Surveyor for 1901.

[2] Information furnished by State Engineer and Surveyor; Barge Canal Survey 1905.

	Feet.
Amboy, near, on Amboy road bridge, No. 97, west wing of towpath abutment; copper bolt in lower step (N. Y. 316)	415.666
Amboy, near, on Ninemile Creek Aqueduct, east retaining wall, towpath side; copper bolt in northwest corner of coping (N. Y. 317)	410.663
Camillus, near, on culvert 58, east wall of first culvert east of Camillus road bridge, towpath side; square cut on northeast corner of coping (N. Y. 318)	404.252
Camillus, near, on Camillus road bridge, No. 98, west wing of towpath abutment; copper bolt in lower step (N. Y. 319)	416.564
Warners, near, on Newport road bridge, No. 99, west wing of towpath abutment; copper bolt in lower step (N. Y. 320)	416.573
Warners, 30 feet north of canal, southwest corner of hotel barn; chisel mark on bowlder (U. S. G. S. b. m.)	412.584
Memphis, near, on Memphis road bridge, No. 100, east wing of towpath abutment; copper bolt in lower step (N. Y. 322)	416.513
Memphis, 0.8 mile west of, on culvert 59, west wing of towpath abutment; copper bolt in coping of buttress (N. Y. 323)	406.156
Memphis, near, on Peru road bridge, No. 101, west wing of towpath abutment; copper bolt in lower step (N. Y. 324)	413.643
Memphis, near, on Shanty Point road bridge, No. 102, east wing of towpath abutment; copper bolt in third step (N. Y. 325)	414.597
Jordan, near, on Carpenter Brook wasteweir, towpath side; square cut on northeast corner of coping of west wall (N. Y. 326)	411.518
Jordan, near, at Jordan Cement Works, at end of railroad siding at back angle of towpath; square cut on southeast corner of concrete foundation (N. Y. 327)	411.774
Jordan, on Beaver Street Bridge, No. 103, west wing of towpath abutment; copper bolt in lower step (N. Y. 328)	414.017
Jordan, at Jordan Aqueduct, east wing of towpath side; copper bolt in coping of parapet (N. Y. 329)	414.290
Jordan, on Main Street Bridge, No. 104, west wing of towpath abutment; copper bolt in lower step (N. Y. 330)	413.137
Jordan, on Hamilton Street Bridge, No. 105, east wing of towpath abutment; copper bolt in lower step (N. Y. 331)	413.145

Phoenix to Plainville.[1]

Phoenix, on southeastern hollow quoin of guard lock 1; copper bolt on coping between straps (N. Y. 54)	364.401
Three River Point, east wing of north abutment of bridge over Oneida River; copper bolt in step (N. Y. 55)	366.107
Belgium, 50 feet north of east wing of highway bridge over Seneca River; copper bolt in doorsill of brick building (N. Y. 56)	369.382
Belgium, near, on property of Henry Lacey, 350 feet from Italian shanty, 550 feet from place where ditch running into Seneca River crosses division line between lands of Henry Lacey and Luke Collins; nail in root of 20-inch elm tree (N. Y. 57)	364.658
Belgium, near, 220 feet from dwelling of John Doyle, 1.1 miles below Cold Spring Bridge, at foot of bluff on flats south of Seneca River; nail in root of elm tree (N. Y. 58)	369.522

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Baldwinsville, near, about 725 feet above Cold Spring Bridge, on left bank of Seneca River; highest point on stone monument (N. Y. 59)	369.250
Baldwinsville, near, about 40 feet west of wire fence, on property of Jay B. Klein, about 6,000 feet above Cold Spring Bridge; nail in root of oak tree (N. Y. 60)	366.076
Baldwinsville, near, on back angle of towpath on property of Jay B. Klein, 5 feet from wire fence, about 1,500 feet west of division line between properties of Alonzo Wagner and J. B. Klein; nail in root of 16-inch elm tree (N. Y. 61)	366.922
Baldwinsville, near, 170 feet east of bridge over small creek, 350 feet from division line between properties of Harriet and Elmer Dixon and E. I. Bisdie, on property of E. I. Bisdie; nail in root of 16-inch poplar tree (N. Y. 62)	367.299
Baldwinsville, near, on left bank of Seneca River, 300 feet from division line between properties of W. S. Names and Curtis Names, on property of W. S. Names, about 1,200 feet above Delaware, Lackawanna & Western R. R. bridge; nail in root of 10-inch ash tree (N. Y. 63)	368.542
Baldwinsville, near, near slaughterhouse, about 700 feet below lock in Baldwinsville side-cut canal; point on stone monument (N. Y. 64)	374.025
Baldwinsville, near, on west end of wall at north end of Baldwinsville Dam; point cut in coping on south side of last stone (N. Y. 65)	376.322
Baldwinsville, 0.5 mile from post office, on property of Otis M. Bigelow, on north river bank; nail in root of elm tree (N. Y. 66)	378.489
Baldwinsville, near, on property of Mrs. Jennie M. Adsit, 550 feet from farmhouse, 420 feet from highway; highest point on bowlder on top of river bank (N. Y. 67)	393.048
Baldwinsville, near, 15 feet from angle in rail fence between properties of Judson Maerfield and Hannah Butler, on Maerfield property; mark cut on bowlder 200 feet from water's edge (N. Y. 68)	376.296
Baldwinsville, 4 miles above, opposite property of Seneca River Brick Co., on property of Adelbert and Frank Fowler, 1,075 feet from west line and 1,100 feet from their east property line; nail in root of elm tree 5 feet from river (N. Y. 69)	377.120
Plainville, near, on land of D. E. Voorheese, 500 feet from east line and 2,000 feet from west line of property; nail in root of chestnut tree (N. Y. 70)	380.611
Plainville, 1.5 miles south of, in north edge of woods on property of David Tillison; nail in root of 13-inch elm tree (N. Y. 71)	378.348
Plainville, near, beside 15-inch oak tree on top of river bank in edge of woods and at end of rail fence, on property of Emerson Gates, about 1,500 feet north of highway bridge over State ditch at Jacks Reef; nail in root of stump (N. Y. 72)	392.806

Point near Liverpool to point near Belgium.[1]

	Feet.
Liverpool, near, on Liverpool road bridge, south wing of towpath abutment; copper bolt in first step (N. Y. 11)	372.288
Belgium, near, on culvert, towpath side; square cut on northwest capstone (N. Y. 12)	365.119
Belgium, near, on road and change bridge, south wing of towpath abutment; copper bolt in first step (N. Y. 13)	373.225
Belgium, near, on lock 5, between anchors; copper bolt in northeast lower towpath hollow quoin (N. Y. 14)	371.039

FULTON QUADRANGLE.

Pennellville to Oswego.[2]

Pennellville, in west side of schoolyard, 57.8 feet from northwest corner of schoolhouse, 111.8 feet north of northwest corner of Methodist Church, in line with north face of schoolhouse; top of a ⅝-inch brass bolt leaded vertically in footstone buried 2½ feet under surface of ground, marked "U. S. B. M. W." (L. S. 123)	412.468
Fulton, 2.8 miles southeast of, in west face, near northwest corner of W. M. Whalin's brick house, on south side of Pennellville-Fulton road; center of a ¼-inch brass bolt leaded horizontally in brick marked "U. S. B. M." (L. S. 124)	399.841
Fulton, on east leaf of north gate of lock 8, Oswego Canal, top of a copper bolt between anchor irons (L. S. 125)	347.946
Fulton, on east leaf of north gate of lock 10, Oswego Canal; top of a copper bolt between anchor irons (L. S. 126)	329.025
Fulton, south wing wall of towpath abutment of first bridge; below lock 10; top of a copper plug in coping (L. S. 127)	323.167
Fulton, south wing wall of east abutment of highway bridge over Oswego Canal on North First Street; top of copper bolt set flush with the masonry in first step (N. Y. State b. m. 19; 1901 L. S. 128)	322.472
Fulton, 0.6 mile north of, on east leaf of middle gate of lock 11; top of a copper bolt between anchor irons (L. S. 129)	320.182
Fulton, 1.6 miles north, on east leaf of middle gate of lock 12; top of a copper bolt between anchor irons (L. S. 130)	312.008
Minetto, northeast lower hollow quoin stone of lock 13; flush with masonry, between anchor irons (N. Y. 21, 1901; L. S. 131)	301.231
Minetto, 0.6 mile north of, east leaf of north gate of lock 14; top of copper plug, flush with masonry, between anchor irons (L. S. 132)	291 631
Oswego, 2.8 miles south of, northeast lower hollow quoin stone of lock 15; top of copper plug, flush with masonry, between anchor irons (N. Y. 22; L. S. 133)	286.672

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[1] Rept. State Engineer and Surveyor for 1901.
[2] Information furnished by U. S. Lake Survey.

Ingalls Crossing to Minetto.[1]

	Feet.
Between Ingalls Crossing and Sand Ridge, south abutment of highway bridge crossing Bell Creek about 250 feet southeast of house of G. Hollenbeck; top of masonry of northwest corner	376.389
Ingalls Crossing, near, about 20 feet north of north right-of-way line of New York, Ontario & Western Ry., about 20 feet west of line fence between Chapman estate and property of A. Wolever, about 3,400 feet west of west headblock of siding at Ingalls Crossing; copper nail in root of tree	375.889
Phoenix, 750 feet southwest in the direction of highway from intersection of highways, about 200 feet east of bridge over Brandy Brook, about 150 feet southeast, at right angles to highway, from this highway, 450 feet north of north edge of Oswego Canal; copper nail in root of oak tree	358.055
Hinmanville, on lower hollow quoin (towpath side) of lock 6, Oswego Canal; copper bolt, flush with masonry, between anchors.	360.681
Between Fulton and Hinmanville, on middle hollow quoin (towpath side) of lock 7, Oswego Canal; copper bolt, flush with masonry, between anchors	353.519
Between Minetto and Fulton, in middle hollow quoin (towpath side) of guard lock 4, Oswego Canal; copper bolt, flush with masonry, between anchors	312.019

MEXICO QUADRANGLE.

Constantia to Pennellville.[2]

Constantia, about 0.5 mile west of, 15 feet north of north right-of-way line of the New York, Ontario & Western Ry., 305 feet east of highway crossing railroad; top of copper nail in root on south side of a chestnut tree 2 feet in diameter (D. W., 1898; L. S. 119)	410.716
West Monroe, in a row of four large elm trees on south side of main road opposite Cross & Wrightman's store; top of 30-penny spike in root on south side of third elm tree, the third from cross road to station (L. S. 120)	395.101
Central Square; square cut on northwest corner of doorstep of door of Low's store, facing bandstand, marked "U. S. B. M." (L. S. 121)	453.975
Caughdenoy, about 0.2 mile west of station, on north side of east abutment of New York, Ontario & Western Ry. bridge 420, first railroad bridge west of Caughdenoy station; square cut on coping (L. S. 122)	380.732

Point near High Banks to Sand Ridge.[1]

High Banks, near, south of Caughdenoy, on east bank of the Oneida River, on west side of highway, about 850 feet north, measured on highway, from wooden bridge over Black Creek; copper nail in root of elm tree	367.501

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[1] Information furnished by Board on Deep Waterways.

[2] Information furnished by U. S. Lake Survey.

	Feet.
Sand Ridge, on property line between J. Ray and C. Breshnahan, about 1,000 feet west of highway, measured along property line; copper nail in root of elm tree	384.279

WEEDSPORT QUADRANGLE.

Jordan to Montezuma.[1]

Jordan, near, on lock 51, towpath lock; copper bolt in southeast hollow quoin (N. Y. 332)	410.627
Jordan, near, on Cold Spring road bridge, No. 106, west wing of towpath abutment; copper bolt in third step (N. Y. 333)	406.705
Weedsport, near, on Fountainville road bridge, No. 107, east wing of towpath abutment; copper bolt in fourth step (N. Y. 334)	408.951
Weedsport, near, on Field's road bridge, No. 108, east wing of towpath abutment; copper bolt in second step (N. Y. 335)	406.169
Weedsport, near, on West Shore R. R. bridge east of Weedsport, east wing of towpath abutment; square cut on lower step (N. Y. 336)	408.125
Weedsport, near, on Putnam's farm bridge, No. 109, east wing of towpath abutment; copper bolt in third step (N. Y. 337)	407.874
Weedsport, near, on Young's farm bridge, No. 110, east wing of towpath abutment; copper bolt in second step (N. Y. 338)	407.013
Weedsport, near, on Lehigh Valley R. R. bridge, east wing of towpath abutment; square cut on second step (N. Y. 339)	407.922
Weedsport, near, on Weedsport wasteweir, east end of east wall of bulkhead; copper bolt in coping (N. Y. 340)	404.344
Weedsport, on Seneca Street Bridge, No. 111; east wing of towpath abutment; copper bolt in third step (N. Y. 341)	407.140
Weedsport, on Brutus Street Bridge, No. 112, east wing of towpath abutment; copper bolt in third step (N. Y. 342)	408.125
Weedsport, near, on West Shore R. R. bridge, west wing of towpath abutment; square cut on lower step (N. Y. 343)	408.007
Weedsport, near, on Centerport Aqueduct, west wing of towpath side; square cut on northeast corner of coping buttress (N. Y. 344)	404.816
Port Byron, near, on Centerport road bridge, No. 113, east wing of towpath abutment; square cut on fourth step (N. Y. 345)	409.510
Port Byron, on first culvert east of Utica Street, towpath side; square cut on northeast corner of coping (N. Y. 346)	402.733
Port Byron, on Utica Street Bridge, east wing of towpath abutment; copper bolt in third step (N. Y. 347)	408.687
Port Byron, on Main Street Bridge, No. 115, east wing of towpath abutment, copper bolt in lower step (N. Y. 348)	407.500
Port Byron, on Port Byron Aqueduct, east wing, towpath side; copper bolt in coping of north buttress (N. Y. 349)	404.238
Port Byron, on Owasco Street Bridge, No. 116, east wing of towpath abutment; copper bolt in fourth step (U. S. G. S. b. m.)	407.540
Port Byron, on Canal Street Bridge, No. 117, east wing of towpath abutment; copper bolt on second step (U. S. G. S. b. m.)	406.620

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Port Byron, on lock 52, north side of lock pier; copper bolt in fourth step from west end (U. S. G. S. b. m.)	403.279
Port Byron, near, on Houghtaling road bridge, No. 118, east wing of towpath abutment; copper bolt in lower step (N. Y. 353)	395.797
Montezuma, near, on McLeod's road bridge, No. 119, west wing of towpath abutment; copper bolt in second step (N. Y. 354)	396.351
Montezuma, near, on Crane Brook Aqueduct, east of west wing of towpath abutment; copper bolt in coping of parapet (N. Y. 355).	397.379
Montezuma, near, on Bucklin's farm bridge, No. 120; west wing of towpath abutment; square cut on third step (N. Y. 356)	396 366
Montezuma, on Salt Street Bridge, No. 121, west wing of towpath abutment; copper bolt in fourth step (N. Y. 357)	397.422
Montezuma, on change bridge, No. 122, west wing of towpath abutment; copper bolt in second step (N. Y. 358)	397.163
Montezuma, on Clark Street Bridge, No. 123, west wing of towpath abutment; copper bolt in third step (N. Y. 359)	396.912
Montezuma, on Seneca River Aqueduct A 12, east end, towpath side; copper bolt in coping of parapet (N. Y. 360)	397 204
Montezuma, on Seneca River Aqueduct A 12, west end, towpath side; copper bolt in coping of parapet (N. Y. 361)	397.037
Montezuma, near, on Mays Point road and change bridge, No. 124, west wing of south abutment; copper bolt in third step (N. Y. 362)	396.902
Montezuma, near, on Mays Point road and change bridge, No.124, west wing of south abutment, set in third step, bronze tablet (U. S. G. S. b. m.)	396 642
Montezuma, near, on first culvert west of Mays Point Bridge, towpath abutment; square cut on southwest corner of coping (N. Y. 364)	391 807

Plainville to Savannah[1]

Plainville, near, on east side of road, 125 feet south of east end of Jacks Reef River bridge; nail in root of hickory tree (N. Y. 73)	390.157
Plainville, near, on shore of Seneca River, at beginning of lane along river on property of R. Graves, about opposite upper end of State ditch; nail in root of large hickory tree (N. Y. 74)	380.011
Plainville, near, on Shore of Cross Lake, 1,200 feet south of outlet near highwater mark on property of W. T. Stephens; nail in root of large hickory tree (N. Y. 75)	381.726
Weedsport, near, on south shore of Cross Lake, in woods, 1,100 feet west of lane to boathouse on land of Mrs. Brotton; nail in root of 10-inch maple stump (N. Y. 76)	375.890
Weedsport, near, south abutment of iron bridge over Seneca River, about 0.8 mile upstream from Cross Lake; point cut on northeast corner of coping stone (N. Y. 77)	383.884
Weedsport, near, 50 feet north of Skaneateles Creek, abut 1,500 east of Bonta's bridge over Seneca River, on property of J. A, Clements; nail in root of 3-foot elm (N. Y. 78)	382.350

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Weedsport, on east side of south abutment of river bridge on highway directly north of Weedsport; point cut on bridge seat (N. Y. 80)	382.147
Port Byron, near, about 10 feet away; west of Casey's clubhouse; nail in root of willow tree (N. Y. 81)	378.457
Port Byron, near, about 1.5 miles north of New York Central & Hudson River R. R. station, east corner of south abutment of Free Bridge across Seneca River; mark cut on bridge seat (N. Y. 82)	385.097
Port Byron, about 2 miles north of, at east angle south of abutment of Mosquito Point Bridge over Seneca River; point cut on bridge seat (N. Y. 83)	385.317
Port Byron, near, about 200 feet from river, 570 feet west of lower bridge to Howland's Island; nail in root of maple tree (N. Y. 84)	379.534
Fox Ridge, just south of New York Central & Hudson River R. R. station, about 10 feet from wire fence; point cut on large bowlder at roadside (N. Y. 85)	386.746
Fox Ridge, New York Central & Hudson River R. R. water station 39, about 100 feet west of bridge over Seneca River; point cut on northeast pedestal stone of water tank foundation (N. Y. 86)	388.922

OSWEGO QUADRANGLE.

Bench mark at Oswego[1]

Oswego, 0.6 mile south of, on east leaf of north gate of guard lock 5; top of copper bolt between anchor irons (L. S. 134)	271.572
Oswego, 0.3 mile south of, on east leaf of north gate of lock 17; top of copper bolt between anchor irons (L. S. 135)	274.717
Oswego, east leaf of middle gate of lock 18; top of ⅝-inch brass bolt leaded vertically in coping between anchor irons (L. S. 136)	258.867
Oswego, at foot of Schuyler Street, at northwest corner of Northwestern Elevator; center of ⅝-inch brass bolt leaded horizontally in water table under chimney, marked "U.S.B.M.°3" (L. S. 137)	254.975
Oswego, at foot of West First Street; circle 2 centimeters in diameter cut on highest point of large bowlder marking site of Fort Oswego (L. S. 138)	262.568
Oswego, at foot of West Third Street, 0.6 foot from east face of dock, 86 feet south of rear face of dock running east toward lighthouse; top of a ⅝-inch brass bolt leaded vertically in top of masonry of old Government pier, marked "U.S.B.M. No. 1" (L. S. 139)	251.733
Oswego, at foot of West Third Street, 0.5 foot from east face of masonry, 3.5 feet north of north face of wooden dock leading to Government boathouse; top of an iron bolt in top of masonry of old Government pier, marked "U.S.+M." (A)	251.898
Oswego, at foot of West Third Street, 8 feet south of masonry of pier, at one of the southwest corners of the Government Reservation, in prolongation south of west face of stone pier; top of stone post set flush with the ground (B)	252.413

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[1] Information furnished by U. S. Lake Survey.

	Feet.
Oswego, on shop of dry dock of marine railroad at foot of West Second Street, on west side of shop, 3 feet north of southwest corner; cross cut in third course of stones from ground (C)	261.977

CLYDE QUADRANGLE.

Montezuma to Lyons.[1]

Montezuma, near, on second culvert west of Mays Point Bridge, towpath side; copper bolt in coping of parapet (N. Y. 365)	393.815
Montezuma, near, western division of Wayne County line bridge, near center of towpath abutment; point cut on projection of fifth course of masonry below coping (N. Y. 366)	396.005
Meadville, near, western division, on culvert 1, towpath side; square cut on southwest corner of coping of parapet (N. Y. 367)	389.518
Meadville, near, western division, on culvert 2, towpath side; square cut on southwest corner of coping of parapet (N. Y. 368)	389.073
Meadville, near, on Pittlock's road bridge, No. 2, west wing of towpath abutment; square cut on coping of buttress (N. Y. 369)	397.115
Meadville, near, western division, on culvert 4, towpath side; square cut on center of coping of parapet (N. Y. 370)	387.944
Meadville, near, western division, on culvert 4, towpath side; square cut on southeast corner of coping of parapet (N. Y. 371)	389.051
Clyde, near, western division, on culvert 5; chiseled square on southwest corner of parapet wall (N. Y. 372)	389.960
Clyde, near, on Waldruff's bridge, No. 3, west wing of towpath abutment; chiseled square on northwest corner (N. Y. 373)	397.324
Clyde, near, square on east wing of West Shore R. R. bridge (N. Y. 374)	395.632
Clyde, near, on dive culvert, towpath side; square cut on parapet wall (N. Y. 375)	389.527
Clyde, berme on Glasow Street Bridge, No. 4; square cut on east wing (N. Y. 376)	398.904
Clyde, berme on lock 53; square on middle of hollow quoin (N. Y. 377)	399.264
Clyde, near, on Siegmund's bridge, No. 6, towpath side; square cut on west wing (N. Y. 378)	401.320
Clyde, near, on Baker's farm bridge, No. 7, towpath side; square cut on east wing (N. Y. 379)	401.632
Lock Berlin, near, Long's farm bridge, No. 8, towpath side; square cut on east wing (N. Y. 380)	402.285
Lock Berlin, near, on dive culvert, towpath side; square cut on parapet wall (N. Y. 381)	394.038
Lock Berlin, on highway bridge, No. 9, towpath side; square cut on east wing (N. Y. 382)	401.117
Lock Berlin, No. 54, berme; square cut on middle of hollow quoin (N. Y. 383)	406.561
Lock Berlin, about 0.4 mile west of, berme of Horton's bridge, No. 10; square cut on east wing (N. Y. 384)	408.970
Lock Berlin, near, berme of Goetzman's farm bridge, No. 11; square cut on east wing (N. Y. 385)	409.831

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Lock Berlin, near, on Kiaus's highway bridge, No. 12, towpath side; square cut on west wing (N. Y. 386)	409.088
Lyons, near, on Richmond's farm bridge, No. 13, berme; square cut on west wing (N. Y. 387)	408.955
Lyons, near, on Cole's highway bridge, No. 14, towpath side; square cut on west wing (N. Y. 388)	408.886
Lyons, on Geneva Street Bridge, No. 15, towpath side; square cut on west wing (N. Y. 389)	409.695
Lyons, on Montezuma Street Bridge, No. 16, towpath side; square cut on west wing (N. Y. 390)	409.358
Lyons, on Water Street Bridge, No. 17, towpath side; square cut on east wing (N. Y. 391)	407.728
Lyons, berme of lock 55; square cut on middle of hollow quoin (N. Y. 392)	412.445
Lyons, at Mud Creek Aqueduct, west wing, towpath abutment; square cut on buttress (N. Y. 393)	412.820
Lyons, near, on Prime's farm bridge, No. 19, berme; square cut on west wing (N. Y. 394)	415.919
Lyons, near, on Park's highway bridge, No. 20, towpath side; square cut on east wing (N. Y. 395)	416.817

Savannah to Clyde.

Savannah, about 0.5 mile east of; highest point on rail driven into ground at base of and in front of New York Central & Hudson River R. R. milepost, "N. Y. 322, Buffalo 118" (N. Y. 87)	405.281
Savannah, about 0.8 mile west of, east end, lower course of north abutment of highway bridge over New York Central & Hudson River R. R.; point cut on face of stone (N. Y. 88)	392.929
Savannah, about 2 miles west of, West Shore R. R. bridge over Crusoe Creek; point cut on northwest corner of bridge seat (N. Y. 89)	388.588
Clyde, 1.8 miles east of, towpath abutment, north wing of New York Central & Hudson River R. R. bridge over Erie Canal; point cut on back of lower step (N. Y. 90)	396.948

PALMYRA QUADRANGLE.

Lyons to Palmyra.[1]

Lyons, near, berme on Poorhouse lock, No. 56; square cut on middle quoin (N. Y. 396)	422.758
Lyons, near, Mosher's highway bridge, No. 21, towpath side; square cut on west wing (N. Y. 397)	425.167
Lyons, near, on dive culvert, towpath side; square cut on parapet wall (N. Y. 398)	417.038
Newark, near, on dive culvert, towpath side; square cut on center of parapet wall (N. Y. 400)	417.881
Newark, on Lockville lock, No. 57, berme; square cut on east hollow quoin (N. Y. 401)	430.249
Newark, berme on Middle Lockville lock, No. 58; square cut on east hollow quoin (N. Y. 402)	438.553

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Newark, berme on Upper Lockville lock, No. 59; square on east hollow quoin (N. Y. 403)	446.450
Newark, on Charles Street Bridge, No. 24, towpath side; square cut on east wing (N. Y. 404)	447.776
Newark, on Newark Baptist Church, corner Charles and Miller streets, in water table; aluminum tablet stamped "457 OSWGO"	457.570
Newark, on wasteweir, towpath side; square cut on middle parapet wall (N. Y. 405)	445.738
Newark, near, on Allerton's highway bridge, No. 26, towpath side; square cut on east wing (N. Y. 406)	449.456
Newark, near, on Peck's highway bridge, No. 27, towpath side; square cut on west wing (N. Y. 407)	448.771
Port Gibson, near, on Sweezey's farm bridge, No. 28, east wing, towpath side; circle cut on first course below coping (N. Y. 408)	448.773
Port Gibson, near, on Palmer's farm bridge, No. 29, towpath side; square cut on east wing (N. Y. 409)	449.156
Port Gibson, on Port Gibson Bridge, No. 30, towpath side; square cut on west wing (N. Y. 410)	449.049
Palmyra, near, on Galloway's highway bridge, No. 31, east wing, towpath side; square cut on lower step (N. Y. 411)	449.569
Palmyra, on Kent Street Bridge, No. 31½, berme, on west wing; square cut on second lower step (N. Y. 412)	448.941
Palmyra, berme of Railroad Avenue Bridge, No. 32; square cut on west wing (N. Y. 413)	451.202
Palmyra, on Church Street Bridge, No. 34, east wing, towpath side; square cut on lower step (N. Y. 414)	447.451
Palmyra, on change bridge, No. 35, east wing, towpath side; square cut on north side (N. Y. 415)	448.563
Palmyra, near, on Mud Creek Aqueduct, west wing, towpath side; square cut on buttress (N. Y. 416)	446.608

MACEDON QUADRANGLE.

Palmyra to Bushnell Basin.[1]

Palmyra, near, on Crandell's highway bridge, No. 36, towpath side; square cut on east wing (N. Y. 417)	449.996
Macedon, near, on Clark's farm bridge, No. 37, east wing, towpath side; square cut on lower step (N. Y. 418)	450.091
Macedon, berme of lock 60; square cut on middle hollow quoin (N. Y. 419)	456.304
Macedon, berme of lock 61; square cut on middle hollow quoin (N. Y. 420)	463.441
Macedon, near, on Frear's highway bridge, No. 41, towpath side; square cut on west wing (N. Y. 421)	465.759
Wayneport, on highway bridge, No. 42, towpath side; square cut on west wing (N. Y. 422)	466.357
Fairport, near, on Knappsville highway bridge, No. 43, towpath side; square cut on east wing (N. Y. 423)	467.459
Fairport, near, on Thomas Creek culvert, No. 26, towpath side; square cut on center parapet (N. Y. 424)	461.537

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Fairport, near, on Baker's highway bridge, No. 44; towpath side; square cut on east wing (N. Y. 425)	467.493
Fairport, on wasteweir, towpath side; square cut on middle parapet wall (N. Y. 426)	466.244
Fairport, near, on Fullman's basin bridge, No. 47, towpath side; square cut on east wing (N. Y. 427)	465.959
Fairport, near, on pipe culvert, No. 27, towpath side; square cut on middle parapet wall (N. Y. 428)	456.002
Fairport, near, on Wapping's highway bridge, No. 48, towpath side; square cut on east wing (N. Y. 429)	464.602
Fairport, near, berme on Wiltsie's highway bridge, No. 49; square cut on east wing (N. Y. 430)	465.944
Bushnell Basin, near, on stop gate, towpath side; square cut on east end recess coping (N. Y. 431)	464.620
Bushnell Basin, near, on Cartersville Bridge, No. 51, middle abutment, inner face, towpath side; "O" cut on fifth course below coping (N. Y. 433)	464.445

ROCHESTER QUADRANGLE.

Pittsford to South Greece.[1]

Pittsford, on Guernsey's bridge, No. 52, towpath abutment, fifth course below coping; "O" cut on projecting stone (N. Y. 434)	465.852
Pittsford, on highway bridge, No. 53, towpath side; square cut on east wing (N. Y. 435)	466.430
Pittsford, on Main Street Bridge, No. 54, middle towpath abutment, fifth course below coping; "O" cut on projecting stone (N. Y. 436)	466.426
Pittsford, near, on Sutherland's highway bridge, No. 55, towpath side; square cut on east wing (N. Y. 437)	466.276
Pittsford, near, on culvert 33, towpath side; square cut on middle parapet wall (N. Y. 438)	454.484
Pittsford, near, on culvert 34, towpath side; square cut on middle parapet wall (N. Y. 439)	451.067
Pittsford, near, on Cook's highway bridge, No. 56, towpath side; square cut on east wing (N. Y. 440)	466.089
Pittsford, near, on berme of lock 62; square cut on middle hollow quoin (N. Y. 441)	472.327
Brighton, near, on Weed's bridge, No. 57, towpath side; square cut on east wing (N. Y. 442)	474.414
Brighton, near, on Billinghurst's bridge, No. 58, towpath side; square cut on east wing (N. Y. 443)	475.969
Brighton, near, on Donely's bridge, No. 59, towpath side; square cut on east wing (N. Y. 444)	475.891
Brighton, near, on Drake's bridge, No. 60, towpath side; square cut on east wing (N. Y. 445)	475.822
Brighton, berme on Miller's lock, No. 63; square cut on middle hollow quoin (N. Y. 446)	481.270
Brighton, berme on Sipple's lock, No. 64; point on middle hollow quoin (center stone), not marked (N. Y. 447)	491.261

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Rochester, near, berme on lock 65; square cut on middle hollow quoin (N. Y. 448)	501.392
Rochester, on Culver Street Bridge, No. 62, towpath side; square cut on east wing (N. Y. 449)	504.812
Rochester, berme on lock 66; square cut on middle hollow quoin (N. Y. 450)	510.712
Rochester, on Goodman Street Bridge, No. 64, towpath side; square cut on east wing (N. Y. 451)	513.618
Rochester, on Averill Avenue Bridge, No. 66, towpath side; square cut on east wing (N. Y. 452)	513.470
Rochester, on weigh lock, east end pier; square cut near snubbing post (N. Y. 453)	510.252
Rochester, on Ford Street Bridge, No. 78, east end towpath abutment; square cut on third step (N. Y. 454)	513.005
Rochester, on Niagara Falls branch New York Central & Hudson River R. R. bridge, towpath side, east end; square cut on first step (N. Y. 455)	512.237
Rochester, on Emerson Street Bridge, No. 85, towpath side; square cut on parapet wall on west end (N. Y. 456)	514.409
Rochester, near, on Scott's bridge, No. 88, towpath side; square cut on east wing (N. Y. 458)	513.497
Rochester, near, on Four Mile Grocery bridge, No. 89, towpath side; square cut on east wing (N. Y. 459)	514.234
South Greece, near, on Spier's bridge, No. 90, towpath abutment, west wing face; chiseled square on corner of coping (N. Y. 460).	513.960
South Greece, near, on Douglass's farm bridge, No. 92, towpath abutment, west wing; chiseled square near face corner (N. Y. 461)	512.583
South Greece, on Findlay's bridge, No. 93, berme abutment, east wing; chiseled square near face corner (N. Y. 462)	513.131

BROCKPORT QUADRANGLE.

South Greece to Brockport.[1]

South Greece, near, on Cromwell's bridge, No. 95, towpath abutment, near center of coping stone; chiseled square on east wing (N. Y. 463)	514.511
Spencerport, near, on Hiscock's bridge, No. 96, towpath abutment, east wing; chiseled square near center of coping stone (N. Y. 464)	513.284
Spencerport, near, on Norman's farm bridge, No. 97, towpath abutment, west wing; painted square near center of coping stone (N. Y. 465)	513.454
Spencerport, on Amity Street Bridge, No. 99, towpath abutment, west wing; chiseled square near center bottom step (N. Y. 466).	513.701
Spencerport, near, on Webster's bridge, No. 101, towpath abutment, east wing; chiseled square on center of bottom step (N. Y. 468).	513.384
Spencerport, near, on Cressy's bridge, No. 102, towpath abutment; chiseled square on west wing (N. Y. 469)	514.307

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Spencerport, on Adams's Basin Bridge, No. 103, towpath abutment; chiseled square on east wing (N. Y. 470)	513.895
Brockport, near, on Doty's bridge, No. 104, berme abutment; east wing; chiseled square on coping (N. Y. 471)	515.434
Brockport, near, culvert 55, towpath side; square cut on coping of parapet (N. Y. 472)	509.279
Brockport, near, on Brockway's bridge, No. 105, towpath abutment; chiseled square on west wing (N. Y. 473)	512.918
Brockport, near, on Cooley's Basin Bridge, No. 106, towpath abutment, east wing; chiseled square on third stone (N. Y. 474).	514.532
Brockport, on Smith Street Bridge, No. 109, towpath abutment, east wing; chiseled square on lower step (N. Y. 476)	513.504
Brockport, abutment on waste weir, east pier; chiseled square (N. Y. 477)	511.962
Brockport, near, on Danforth's bridge, No. 110, towpath abutment, east wing; chiseled square on coping (N. Y. 478)	515.823

ALBION QUADRANGLE.

Holley to Albion.[1]

Holley, near, on Miner's bridge, No. 111, east wing, towpath, chiseled square on offset (N. Y. 479)	511.675
Holley, near, on Orr's bridge, No. 113, west wing, towpath abutment; chiseled square (N. Y. 480)	516.513
Holley, on Main Street Bridge, No. 115, towpath abutment; red paint mark on east wing (N. Y. 481)	515.050
Holley, near, on Tuttle's bridge, No. 117, towpath abutment; chiseled square on east wing and red paint mark (N. Y. 482)	516.219
Hulberton, on bridge 119, towpath abutment; chiseled square on east wing (N. Y. 483)	515.992
Hulberton, near, on Brockville Bridge, No. 120, towpath abutment, chiseled square on east wing (N. Y. 484)	515.311
Hulberton, near, on Hindsburg Bridge, No. 121, towpath abutment; chiseled square and red paint mark on east wing (N. Y. 485)	516.677
Albion, near, on Jacqueth's bridge, No. 123, towpath abutment; chiseled square and red paint mark on east wing (N. Y. 486)	516.954
Albion, near, on Brailey's bridge, No. 125, towpath abutment; chiseled square on west wing (N. Y. 487)	515.460
Albion, on Ingersoll Street Bridge, No. 127, towpath abutment, east wing; chiseled square on lower step (N. Y. 488)	513.548
Albion, near, on Lattin's bridge, No. 129, towpath abutment; chiseled square on west wing (N. Y. 489)	516.492
Albion, near, on Gaines Basin Bridge, No. 130, towpath abutment, west wing; chiseled square on lower step (N. Y. 490)	514.703

MEDINA QUADRANGLE.

Eagle Harbor to Middleport.[1]

Eagle Harbor, on Eagle Harbor Bridge, No. 131, towpath abutment, east wing; chiseled square on lower step (N. Y. 491)	515.708

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Eagle Harbor, near, on Starkweather's farm bridge, No. 132, towpath, chiseled square on east wing (N. Y. 493)	516.866
Knowlesville, near, on Long's bridge, No. 134, towpath abutment, east wing; chiseled square on face corner (N. Y. 494)	515 691
Knowlesville, near, on dive culvert 91; square cut on towpath parapet (N. Y. 495)	510.622
Knowlesville, near, on Knowlesville Bridge, No. 135, west wing of towpath abutment; chiseled square on second lower step (N. Y. 496)	516.625
Knowlesville, near, on Knowlesville stop gate, east abutment, towpath side; chiseled square (N. Y. 497)	513.611
Medina, near, on Beal's bridge, towpath abutment; chiseled square on east wing (N. Y. 498)	515.162
Medina, near, on Hasting's bridge, No. 137, west wing of towpath abutment; chiseled square on corner coping (N. Y. 499)	516.464
Medina, on Holloway's bridge, No. 138, east wing of towpath abutment; square cut around anchor bolt (N. Y. 500)	515.861
Medina, on Medina Aqueduct, west abutment; chiseled square on northwest corner (N. Y. 501)	513.727
Medina, on Church Street Bridge, No. 139, east wing; square cut around anchor bolt on towpath abutment (N. Y. 502)	515.401
Medina, near, on old stop gate, red paint mark on east end of towpath abutment (N. Y. 504)	514.323
Medina, near, on dive culvert 100; square on towpath parapet (N. Y. 505)	511.557
Medina, near, on Jackson's bridge, No. 141, towpath abutment; chiseled square on west wing (N. Y. 506)	516.257
Medina, near, on Shelby's Basin Bridge, No. 142, towpath abutment; chiseled square on east wing (N. Y. 507)	517.842
Middleport, near, on Gorman's bridge, No. 143, towpath abutment; chiseled square on east wing (N. Y. 508)	517.790
Middleport, near, on dive culvert 104; chiseled square on center of towpath parapet (N. Y. 509)	511 572
Middleport, on Main Street Bridge, No. 145, west wing of towpath abutment; chiseled square on lower step (N. Y. 510)	515.631
Middleport, near, on dive culvert 108, on towpath parapet; chiseled square on end of coping (N. Y. 511)	508.806

LOCKPORT QUADRANGLE.

Lockport to Wrights Corners.[1]

Lockport, about 1 mile west of, lower course, south angle of west abutment of the more westerly of two subways under the New York Central & Hudson River R. R., at head of gulf; square cut on projection of stone at angle of abutment and wing wall.	590.338
Lockport, about 2.5 miles northwest of, on stone road; square cut on north corner of water table of two-story red brick dwelling occupied by Mr. Pickles	400 495
Lockport, at intersection of turnpike and Ewing road; square cut on west end of stone doorstep of red brick schoolhouse 13	372.054

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[1] Information furnished by Board on Deep Waterways.

	Feet.
Wrights Corners, about 300 feet north of intersection of Lake Avenue and turnpike road, on two-story brick residence occupied by Mr. Boist, at northeast corner of house; square cut on stone water table	404.335

Middleport to Pendleton.[1]

Middleport, near, on Watson's bridge, No. 147; chiseled square on west wing, towpath abutment (N. Y. 512)	516.612
Middleport, near, towpath abutment of Hurd's bridge, No. 148; chiseled square around anchor bolt on east wing (N. Y. 513)	516.775
Gasport, near, towpath abutment on Reynolds Basin Bridge, No. 149; chiseled square on east wing, lower step (N. Y. 514)	516.310
Gasport, on dive culvert 114; chiseled square on towpath parapet (N. Y. 514)	510.434
Gasport, on dive culvert 115; chiseled square on towpath parapet (N. Y. 516)	509.432
Gasport, near, towpath abutment of Orangeport Bridge, No. 152; chiseled square on west wing (N. Y. 517)	516.109
Gasport, near, on dive culvert 116; chiseled square on towpath parapet (N. Y. 518)	508.643
Gasport, near, on dive culvert 117; chiseled square on towpath parapet (N. Y. 519)	506.887
Gasport, near, towpath abutment of Millard's bridge, No. 153; paint mark on east wing (N. Y. 520)	520.708
Lockport, near, towpath abutment on coping of Wakeman's bridge, No. 154; paint mark on west wing (N. Y. 521)	520.530
Lockport, near, towpath abutment, west wing of Young's bridge, No. 155; paint mark on coping (N. Y. 522)	521.189
Lockport, towpath abutment of New York Central & Hudson River R. R. bridge (lower town branch); chiseled square on east end, rear corner (N. Y. 523)	512.943
Lockport, towpath abutment of Adams Street Bridge, No. 157; chiseled square on east wing, lower step (N. Y. 524)	515.533
Lockport, towpath abutment of Cady Street Bridge, No. 160; chiseled square on west wing, first lower step (N. Y. 525)	516.416
Lockport, on lock 67, towpath; chiseled square on first lower step (N. Y. 526)	518.823
Lockport, chiseled square on east berme, hollow quoin of lock 71 (N. Y. 527)	570.550
Lockport, near, 200 feet east of bridge 165; iron ringbolt at northeast corner of plank towpath bridge over horse hole (N. Y. 528).	574.972
Lockport, near, on stone wall; paint mark (N. Y. 529)	577.454
Lockport, near, towpath abutment on Hawley's bridge, No. 167; chiseled square on west end of pier, on first course of stone (N. Y. 530)	574.803
Pendleton, near, 1.5 miles east of, on east berme, hollow quoin of Sulphur Springs guard lock; chiseled square (N. Y. 531)	581.344
Pendleton, berme side of Pendleton change bridge, No. 169; on east wing; chiseled square, east end of lower step (N. Y. 532).	575.260

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[1] Rept. State Engineer and Surveyor for 1901.

	Feet.
Pendleton, near, west abutment of highway bridge over Black Creek; chiseled square on northwest wing (N. Y. 533)	575.970

OLCOTT QUADRANGLE.

Olcott south to Newfane [1]

Olcott, on north side of street, about 200 meters west of wagon bridge over Eighteen-mile Creek, southwest corner of a two-story brick building occupied as a general store, owned by C. D. Shaw; square cut on stone water table (D. W. 4)	259.245
Olcott, on top of hill west of Eighteen-mile Creek, 125 meters south of main road leading north from wagon bridge over creek, at southwest corner of a one-story schoolhouse built of concrete, walls covered with water-worn pebbles; square cut on stone water table (D. W. 5)	286.305
Olcott, north end of west abutment of a wagon bridge over Eighteen-mile Creek, 4 inches west and 1½ inches south of northeast corner; square cut on top of bridge seat stone	249.851
Olcott, in front of Albright Hotel, on stone cap of foundation under west post of porch over carriageway; chiseled square cut on southeast corner of stone and marked "U. S."	273.989
Olcott, at front entrance to the Albright Hotel, on large stone doorsill, 1½ inches back from front edge of stone and 3 inches east of west door jamb; small square cut on west side of entrance	275.744
Olcott, at front entrance to the First Universalist Church, on east side of first north-south street east of Eighteen-mile Creek, about 250 meters south of south shore of Lake Ontario; square cut on front edge of south end of stone doorsill (D. W. 1)	287.306
Newfane, about 300 meters west of, south end of east abutment of the New York Central & Hudson River R. R. bridge over Eighteen-mile Creek; top of a square cut on southwest corner of first stone step above the bridge seat	314.399
Coomer, near, 0.8 mile west of Eighteen-mile Creek, on north end of west abutment of New York Central & Hudson River R. R. bridge over Hopkins Creek; summit of a small square cut on top of stone	315.994

Bench marks near Newfane.[2]

Newfane, 1.5 miles south of, in cemetery on east side of Lake Avenue, on Pettit lot monument, southeast corner; loop of capital P (U. S. G. S. b. m.)	356.895
Newfane, near iron highway bridge on crossroad over Eighteen-mile Creek, in northern portion of village; square cut on cut-stone bridge seat at north end of east abutment	305.185
Newfane, about 2,700 feet north of, on west creek road; square cut on southwest corner of stone water table of brick schoolhouse (No. 10)	330.256

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[1] Information furnished by U. S. Lake Survey.

[2] Information furnished by Board on Deep Waterways.

TONAWANDA QUADRANGLE.

Ransomville along New York Central & Hudson River R. R. to Modeltown.[1]

	Feet.
Ransomville, southwest corner of intersection of two main streets of village, northeast corner of brick building owned and occupied by W. H. H. Ransom & Son as a general store; top of brass bolt, leaded vertically in top of water table 20 inches west of northeast corner and marked "U. S."	327.087
Ransomville, 100 meters east of station, on south end of west abutment of a plate-girder railway bridge on the New York Central & Hudson River R. R.; top of small square cut on third stone step from ground, about 6 inches below bridge seat	322.998
Modeltown, 1,690 meters north of, 225 meters north of road crossing, on flange of rail set in ground 2 meters west of track, marking milepost 167 on the New York Central & Hudson River R. R.; top of a square cut on flange	328.900
Modeltown, 200 meters south of railway station, in south face of fifth stone above ground in southeast corner of the Erie Preserving Co.'s warehouse; center of a brass bolt leaded horizontally 13 inches below platform in front of building	363.630
Modeltown, 1,892 meters southwest of, just east of railroad crossing of main road east from Lewiston; square cut on stone coping at north end of box culvert on New York Central & Hudson River R. R.	414.023

La Salle southeast to Tonawanda.[1]

La Salle, about 0.2 mile west of New York Central & Hudson River R. R. station, on main road along river front, at southeast corner of brick residence belonging to E. H. Smith, top of brass bolt leaded vertically in top of water table	580.290
La Salle, just south of station, east abutment of the New York Central & Hudson R. R. bridge over Cayuga Creek; top of a square cut on northwest corner of bridge seat stone (D. W., La Salle 1)	571.611
La Salle, near, 2,625 meters north of Niagara Falls & Buffalo Electric Ry. bridge over railroads and roadway, just inside southeast corner of small field near fence on west side of road along river front; top of 20-penny nail driven into south root of an elm tree 28 inches in diameter	573.231
La Salle, near, on right bank of Niagara River, on main road 510 meters below Niagara Falls & Buffalo Electric Ry. bridge over railroads and wagon road, on east front of brick schoolhouse in district 2; square cut on south end of stone water table (D. W., Wheatfield)	576.541
North Tonawanda, about 1 mile below city limits, between North Tonawanda and La Salle, trestle over roadway west of west pier of bridge carrying electric railway over New York Central & Hudson River R. R. and the Erie R. R.; top of a 1-inch anchor bolt in foundation stone of first iron trestle bent, marked with a chiseled cross (D. W., Crossing)	572.476

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[1] Information furnished by U. S. Lake Survey.

	Feet.
North Tonawanda, right bank of Niagara River, west side of Main Street, 2 meters south of entrance to old engine house of Tonawanda Iron & Steel Co.; top of a small square in northeast corner of large square cut in corner of stone water table (D. W., North Tonawanda 2)	578.822
North Tonawanda, on corner of Vandervoort and Robinson Streets, at most eastern entrance to the front of Ascension Church; top of a square cut on top of west end of granite doorsill (D. W., Tonawanda 1)	579.787
Tonawanda, on north-east surface stone of south abutment of the Tonawanda Dam; top of a high point between bolted iron bars in small square inside large square cut on top of stone (D. W., North Tonawanda 2)	575.146
Tonawanda, on southeast corner of Broad and Seymour Streets, on west side of steeple of Christian Chapel; intersection of two cross marks cut in center of large square on top of stone water table (D. W., Tonawanda 1)	576.214
Tonawanda, 1,200 meters south of bridge over Erie Canal on Main Street, west end of north abutment of bridge over State ditch on Main Street; top of a brass bolt leaded vertically in top of stone coping, marked "U. S. P. B. M."	575.153
Tonawanda, 5 meters west of German Cemetery fence, 27 meters south of entrance to cemetery; square cut on top of stone cover of catch-basin on east side of Main Street	585.924

Tonawanda to Pendleton.[1]

Tonawanda, near, on west abutment of Cherry's bridge; square cut on second stone below coping, projecting back of the abutment	576.345
Pendleton Center, near, at south-west corner of barrel-organ factory; square cut on stone water table	581.491
Pendleton Center, on east side of highway, about 400 feet north of Erie R. R. station; square cut on top of light-colored gneiss or granite bowlder about 3 feet in diameter	591.151
Pendleton, west corner of brick house owned by H. S. Taylor, east of the church; square cut on corner of stone water table.	620.984

Bench mark near La Salle.

La Salle, near, northwest corner of cut-stone monument between tracks, monument numbered 16, about 600 feet west of Military Road where Cataract Construction Co.'s line branches southwest	606.286

Point near Pendleton to Tonawanda.[2]

Pendleton, near, towpath abutment of New Home Bridge, No. 173; chiseled square on west wing, corner, first lower step (N. Y. 534)	576.457
Pendleton, near, on face of abutment of Pickard's bridge, No. 174, towpath; chiseled square near west end (N. Y. 535)	577.416

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[1] Information furnished by Board on Deep Waterways.
[2] Rept. State Engineer and Surveyor for 1901.

Pendleton, near; chiseled square on northeast corner of Stone road culvert (N. Y. 536)	575.284
Tonawanda, near Bush's bridge, No. 175; painted square on face of towpath abutment (N. Y. 537)	575.646
Tonawanda, towpath abutment on Erie R. R. bridge; chiseled square on west wing, first lower step (N. Y. 538)	579.015
Tonawanda, towpath abutment of Bouck Street Bridge, No. 180; chiseled square on west wing (N. Y. 539)	578.632
Tonawanda, at Tonawanda change bridge, No. 182; chiseled square on towpath abutment, first coping stone (N. Y. 541)	578.469

NIAGARA FALLS QUADRANGLE.

Lewiston southeast to point 1 mile west of La Salle.[1]

Lewiston, at corner of Center and Ninth streets; square cut on northwest corner of stone sill of north door of west wing of old seminary building (D. W., Lewiston)	401.331
Lewiston Heights, 101 meters east of center of, on upper wagon road from Lewiston Heights station to Lewiston; center of brass bolt leaded horizontally in vertical face of rock, marked "U. S. P. B. M."	506.404
Lewiston Heights, 12 meters east of northeast corner of Lewiston Heights station, 3 meters north of center of track of the New York Central & Hudson River R. R., on top of retaining wall, on south side of wagon road; top of a small square cut on large stone	530.919
Lewiston Heights, near, approximately 30 feet in front of north pillar of Penjerrick gateway, on east side of Military Road, about 200 feet south of junction with river road; summit of a small square cut on rock at north end of small drain under railway (D. W., Lewiston Heights 1)	600.870
Niagara Falls, about 2 miles north of, 60 meters east of top of gorge of Niagara River, in west corner of main building of Niagara University; center of a brass bolt leaded horizontally into stone 4½ inches east of corner and 20 inches above ground	589.352
Niagara Falls, northwest corner of Suspension Bridge passenger station on New York Central & Hudson River R. R., 43 inches above platform and 6 inches south of northwest corner of building; center of a brass bolt leaded horizontally into center of seventh stone above water table	584.376
Niagara Falls, on west line of Sugar Street, 65 meters south of New York Central & Hudson River R. R. track to Lockport, 426 meters north of Ontario Street; top of a small square cut in top of granite bowlder about the size of an oil barrel	603.480
Niagara Falls, in gutter about 10 feet northwest of entrance to main building of the Niagara Falls power plant, 3 meters north of north door jamb, 1 meter out from building; copper bolt leaded in center of a stone 5½ inches square in concrete with a small square cut on northwest corner	566.547

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[1] Information furnished by U. S. Lake Survey.

	Feet.
Niagara Falls, west door on south side of Echota station of the New York Central & Hudson River R. R.; top of a small square in southeast corner of a larger square cut in west end of stone sill	572.922
Niagara Falls, on sill of first window west of northeast corner of Niagara Falls Power Co.'s powerhouse, 7 inches west of east side of window on side of building facing Buffalo Avenue; top of brass bolt leaded vertically in east end of stone	571.827
La Salle, 1 mile west of, on north side of main river road, at southwest corner of brick schoolhouse in district 5; top of square cut on stone water table	575.264

Bench marks near Lewiston [1]

Lewiston, northeast corner of foundation of brick store owned by Eugene Murphy, on lot 252, on south side of Center Street, between Fourth and Fifth streets; square cut on water table	363.346
Lewiston, 1.3 miles north of, just west of river road, about 1,600 feet north of residence of F. Hays; head of spike driven in bench cut on root of white oak tree 12 inches in diameter	325.296
Lewiston, near, north abutment of trestle 2, on Gorge route over Fish Creek, about 5,600 feet south of New York Central & Hudson River R. R. station; square cut on top of southeast corner of fifth stone from west wing	284.686

BUFFALO QUADRANGLE.

Pullman south to Buffalo.[2]

Pullman, on Military Road, 12 meters west of center of electric-car tracks, 180 meters north of large frame house on west side of road, opposite steel ball factory at Pullman station; top of a 20-penny nail driven into southeast root of elm tree 20 inches in diameter, standing farthest north in a line of five trees	604.096
Buffalo, at city limit, on north side of Military Road, on street line 220 meters north of large saloon building; top of a square cut on top of large bowlder	603.820
Buffalo, 73 meters west of Military Road and 145 meters south of Delaware, Lackawanna & Western R. R. tracks; top of a 20-penny wire nail driven into west root of an elm tree 13 inches in diameter	603.603
Buffalo, northwest corner of intersection of Hertel Avenue and East Street, in front of St. John Baptist Church; highest point in a square cut on stone water table	592.025
Buffalo, 600 meters below International Bridge over Erie Canal at Black Rock, in center of coping stone on towpath side of guard lock of Erie Canal, opposite hinge of upper gate, 7 meters below upper end of lock; highest point in a small square cut in southeast corner of larger square (said to be Board on Deep Waterways p. b. m. Guard Lock)	576.650

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[1] Information furnished by Board on Deep Waterways.
[2] Information furnished by U. S. Lake Survey.

	Feet.
Buffalo, south end of east abutment of bridge 192 over Erie Canal on Bridge Street, or first bridge over Erie Canal below the International Bridge; top of a brass bolt leaded vertically into top of stone on bottom step	580.21
Buffalo, north end of east abutment of International Bridge over main channel of Niagara River; square cut on a projection of stone in fourth course of masonry below bridge seat, marked in white paint "U. S. B. M., 88" (D. W., International Bridge 2)	582.258
Buffalo, east abutment of International Bridge over Erie Canal; highest point in a square cut on projecting ledge of third stone from south, and fifth course below bridge seat (D. W.)	579.854
Buffalo, on river side of main building of pumping station of the Buffalo Waterworks; center of brass bolt leaded horizontally into stone window sill of center window, marked "U. S. P. B. M."	582.804
Buffalo, northwest corner of fire-tug station at foot of Genesee Street, on lake front; top of knob cut on corner of stone water table, 2½ feet above the pavement	581.836
Buffalo, on plinth of most northerly Buffalo lighthouse, south of United States pier and connected with the pier, in line with Erie Street; top of a high point on east corner and upper surface of plinth	590.101

Tonawanda to Buffalo.[1]

Tonawanda, near towpath abutment of Three Mile Bridge, No. 183; chiseled square on east wing (N. Y. 542)	578.509
Tonawanda, near, rear of towpath abutment, second course below coping of Cherry's bridge, No. 184; chiseled square on west wing, marked with paint "U.S.B.M. 218" (N. Y. 543)	576.173
Tonawanda, near, towpath abutment of Spie's bridge, No. 185; chiseled square on east wing, painted "U.S.B.M. 216" (N. Y. 544)	577.231
Buffalo, near, towpath abutment of Scott's bridge, No. 186; chiseled square on west wing, painted "U.S.B.M." (N. Y. 545)	578.094
Buffalo, near, 0.97 mile east of International Bridge, on south side of west wing of change bridge, No. 187; chiseled square, painted "U.S.B.M. 9" (N. Y. 546)	579.476
Buffalo, near, International Bridge; chiseled square on face of towpath abutment, painted "U.S.B.M. 7" (N. Y. 548)	579.853
Buffalo, on Ferry Street Bridge, No. 194, towpath abutment; chiseled square on west wing, painted "U.S.B.M. 6" (N. Y. 549)	581.664
Buffalo, on Porter Avenue Bridge, No. 196; chiseled square on face of towpath abutment, bottom course, between fourth and fifth arch ribs (N. Y. 550)	576.266
Buffalo, on Hudson Street Bridge, No. 196½; towpath abutment; chiseled square on south wing, first lower step, painted "U.S.B.M. 211" (N. Y. 551)	581.802
Buffalo, on Commercial Street Bridge, No. 204, towpath abutment; chiseled square on north wing, second lower step (N. Y. 552)	579.513

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[1] Rept. State Engineer and Surveyor for 1901.

WILSON QUADRANGLE.

Bench marks near Wilson.[1]

	Feet.
Wilson, about 1.5 miles east of, in south root of poplar tree 2½ feet in diameter standing on fence line on north side of east-west road, at east end of hedgerow and at southwest corner of lawn in front of residence of Mr. H. Pease; top of 30-penny nail driven into root 2½ feet south of trunk of tree.................	305.839
Wilson, northwest corner of Exley Methodist Episcopal Church; center of brass bolt leaded horizontally on water table, marked "U.S.P.B.M."	289.812
Ransomville, 4 miles east of, 697 meters west of milepost 158, on south end of west abutment of a plate-girder railway bridge over east branch of Twelve-mile Creek, on New York Central & Hudson River R. R.; square cut in top of bridge seat and marked "U.S."	312.569
Ransomville, 2,650 meters east of, 340 meters east of milepost 161, at edge of timber, on north end of west wall of open culvert on New York Central & Hudson River R. R.; square cut on stone on top of second step from top................................	320.734

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[1] Information furnished by U. S. Lake Survey.

APPENDIX B.

SECONDARY ELEVATIONS.

Secondary elevations from records and topographic maps of the United States Geological Survey, including vertical angle bench marks, altitudes of well known summits, water surface elevations of prominent lakes, and other useful elevations are given below. These elevations are approximate only and should not be used for accurate work.

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Ackerman Pond, water surface	Newcomb	Essex	1,681
Acra Point	Durham	Greene	3,085
Adams	Sacketts Harbor	Jefferson	597
Adams Center	Sacketts Harbor	Jefferson	610
Adams Mountain	Santanoni	Essex	3,584
Adams triangulation station	Hoosick	Washington	1,520
Addison Junction	Ticonderoga	Essex	117
Adebahr triangulation station	Amsterdam	Montgomery	1,062
Afton Lake, water surface	Nineveh	Chenango	986
Alabama	Medina	Genesee	648
Alder	Attica	Erie	860
Alden	Depew	Erie	836
Alden Center	Depew	Erie	835
Alden Corners	Chautauqua	Chautauqua	1,654
Alden Station	Attica	Erie	841
Alder Brook Mountains	Lyon Mountain	Franklin	2,604 2,612
Alder Lake, water surface	Margaretville	Ulster	2,282
Alexander	Attica	Genesee	1,040
Alexander	Batavia	Genesee	933
Alexander Pond, water surface	Nineveh	Broome	1,710
Alford Mountain	Santanoni	Franklin	2,630
Allen Lake, water surface	Richfield Springs	Otsego	1,621
Allen Mountain	Mount Marcy	Essex	4,345
Allens Hill	Honeoye	Ontario	1,016
Allis Hill triangulation station	Chittenango	Madison	503
Altona	Mooers	Clinton	599
Amboy Station	Baldwinsville	Onondaga	404
Amenia	Millbrook	Dutchess	557
Ames	Canajoharie	Montgomery	717
Amity	Goshen	Orange	503
Ampersand Lake, water surface	Santanoni	Franklin	1,875
Ampersand Mountain triangulation station	Santanoni	Franklin	3,365
Amsterdam Reservoir	Broadalbin	Saratoga	867
Angels Corner	Clyde	Wayne	434
Anskerada	Gloversville	Fulton	1,553
Anthonys Nose	Ticonderoga	Washington	1,048
Anthonys Nose	West Point	Westchester	900
Apalachin	Apalachin	Tioga	810
Apulia station	Tully	Onondaga	1,242
Arab Mountain triangulation station	Tupper Lake	St. Lawrence	2,539
Arena	Margaretville	Delaware	1,263
Arkville	Margaretville	Delaware	1,367
Arkwright	Cherry Creek	Chautauqua	1,632
Armor	Eden	Erie	824
Armstrong Mountain	Mount Marcy	Essex	4,455
Arnold Lake, water surface	Hartwick	Otsego	1,774
Ashland	Gilboa	Greene	1,422
Ashville	Chautauqua	Chautauqua	1,324

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Attica Center	Batavia	Wyoming	1,543
Augur Lake	Ausable Willsboro	Essex	549
Augusta	Morrisville	Oneida	956
Aurelius	Auburn	Cayuga	644
Ausable Forks	Ausable	Essex	551
Ava	Boonville	Oneida	1,370
Averill Peak triangulation station	Lyon Mountain	Clinton	3,810
Babcock Pond, water surface	Hoosick	Rensselaer	1,290
Bad Luck Mountain	Newcomb	Essex	2,171
Bailey Hill	Schroon Lake	Essex	3,115
Baker Hill	Macedon	Monroe	928
Baker Hill	Palmyra	Wayne	680
Baldface Mountain	Ausable	Essex	2,220
Baldface Mountain	Loon Lake	Franklin	2,860
Bald Head triangulation station	Luzerne	Warren	2,920
Bald Hill	Hobart	Schoharie	2,778
Bald Hill	Poughkeepsie	Dutchess	1,540
Bald Hill	Riverhead	Suffolk	302
Bald Knob	Port Henry	Essex	2,049
Bald Mountain	Ausable	Essex	2,139
Bald Mountain	Dryden	Tompkins	1,884
Bald Mountain	Hoosick	Rensselaer	2,693
Bald Mountain	Schuylerville	Washington	316
Bald Mountain	Tarrytown	Westchester	688
Bald Mountain triangulation station	Schuylerville	Washington	762
Bald Peak	Elizabethtown	Essex	3,007
Baldwinsville triangulation station	Baldwinsville	Onondaga	538
Balfour Pond, water surface	Newcomb	Essex	1,786
Ballston Lake, water surface	Schenectady	Schenectady	285
Ballston Spa	Saratoga	Saratoga	276
Balm of Gilead Mountain	Thirteenth Lake	Warren	2,450
Balsam Lake, water surface	Margaretville	Ulster	2,575
Balsam Mountain	Phoenicia	Greene	3,565
Balsam Mountain	Phoenicia	Ulster	3,590
Balsam Roundtop	Margaretville	Ulster	3,723
Bare Rock	West Point	Orange	1,165
Barnes Corners	Watertown	Lewis	1,412
Barnes Pinnacle	Loon Lake	Franklin	2,016
Barnum Pond, water surface	St. Regis	Franklin	1,651
Barrett Pond, water surface	Carmel	Putnam	779
Barrington	Penn Yan	Steuben	1,560
Bartlett Corners	Hamlin	Monroe	277
Bartlett Mountain	Luzerne	Warren	1,624
Bartlett Pond, water surface	Elizabethtown	Essex	1,200
Bartlett Ridge	Mount Marcy	Essex	3,880
Barto Hill triangulation station	Little Falls	Herkimer	1,652
Barton Hill	Elizabethtown	Essex	1,889
Basin Mountain	Mount Marcy	Essex	4,825
Bassett Mountain	Lake Placid	Essex	1,954
Batavia triangulation station	Medina	Genesee	956
Bates	Gilboa	Schoharie	1,236
Batten Kill, water surface at Greenwich	Cambridge	Washington	352
Baxter Mountain	Mount Marcy	Essex	2,400
Bay Pond, water surface	St. Regis	Franklin	1,545
Beadle triangulation station	Greene	Chenango	1,613
Bean Lake, water surface	McKeever	Herkimer	1,613
Beat Den Mountain	Mount Marcy	Essex	3,423
Bear Gulch Pond, water surface	Richmondville	Schoharie	2,100
Bear Hill	Lassellsville	Fulton	1,268
Bear Mountain	Paradox Lake	Essex	1,656
Bear Mountain	Schunemunk	Orange	1,314
Bearpen Mountain	Gilboa	Greene	3,598
Bearpen Peak	Stony Creek	Warren	2,550
Bear Pond, water surface	Big Moose	Herkimer	2,044
Bear Pond, water surface	Tupper Lake	Hamilton	1,866
Bear Pond Mountain	Paradox Lake	Essex	1,867
Bear Swamp Pond, water surface	Richmondville	Otsego	2,032
Beaverdam Pond, water surface	Big Moose	Herkimer	1,746
Beaverdam Pond, water surface	Neversink	Sullivan	1,048
Beaver Lake, water surface	West Canada Lakes	Hamilton	1,834
Beaver Mountain	Newcomb	Essex	2,906
Beaver Ponds, water surface	Newcomb	Essex	1,674
Beaver River Flow, water surface	Big Moose	Herkimer	1,658
Beebe Hill	Pittsfield	Columbia	1,764

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Beecher Lake, water surface	Margaretville	Ulster	2,760
Beech Hill	Schroon Hill	Essex	2,203
Beech Mountain	Bolton	Warren	2,052
Beech Ridge	Mount Marcy	Essex	2,532
Belfast	Angelica	Allegany	1,317
Belfry Hill	Elizabethtown	Essex	1,892
Belle Ayr Mountain	Margaretville	Ulster	3,406
Belle Ayr Mountain	Phoenicia	Ulster	3,380
Belleview	Chautauqua	Chautauqua	1,323
Belleville	Sacketts Harbor	Jefferson	458
Bellows Lake, water surface	Gloversville	Fulton	1,779
Bell Pond, water surface	Catskill	Columbia	222
Bellvale	Goshen	Orange	653
Bellwood	Carthage	Lewis	1,606
Bennett Hill	Albany	Albany	1,145
Bennett Lake, water surface	Stony Creek	Hamilton	1,169
Bennington	Attica	Wyoming	1,207
Bennington Corners	Attica	Wyoming	1,372
Benson	Lake Pleasant	Hamilton	1,154
Benton	Penn Yan	Yates	838
Berlin Mountain	Berlin	Rensselaer	2,804
Bernard Bay	Chittenango	Oswego	414
Berry Hill triangulation station	Norwich	Chenango	1,960
Besemer	Dryden	Tompkins	950
Bethany	Batavia	Genesee	1,177
Bettner Ponds, water surface	Tupper Lake	Hamilton	1,803
Betts Hill	Delhi	Delaware	2,130
Beulah	Brockport	Monroe	647
Big Alderbed Mountain	Piseco Lake	Hamilton	2,490
Big Bad Luck Pond, water surface	Newcomb	Essex	1,690
Big Brook	Boonville	Oneida	705
Big Burnt Lake, water surface	Big Moose	Herkimer	1,656
Big Crooked Lake, water surface	Big Moose	Herkimer	2,044
Big Crow Mountain	Ausable	Essex	2,820
Bigelow Mountain triangulation station	Willsboro	Essex	1,644
Big Indian	Phoenicia	Ulster	1,215
Big Indian Mountain	Phoenicia	Ulster	3,721
Big Lake, water surface	Tully	Cortland — Onondaga.	1,189
Big Moose Lake, water surface	Big Moose	Herkimer	1,824
Big Pisgah Mountain	Newcomb	Essex	2,094
Big Pond, water surface	Margaretville	Delaware	2,010
Big Pond, water surface	Port Jervis	Orange	1,320
Big Range	Indian Lake	Hamilton	3,408
Big Range triangulation station	Thirteenth Lake	Hamilton	3,310
Big Rock Lake, water surface	Piseco Lake	Hamilton	2,315
Bigsby Hill	Schroon Lake	Essex	2,100
Bigsby Pond, water surface	Schroon Lake	Essex	1,562
Big Slide Mountain	Mount Marcy	Essex	4,255
Binnewater	Rosendale	Ulster	206
Birch Hill triangulation station	Fort Ann	Washington	1,266
Birch Mountain	North Creek	Warren	1,341 1,683
Black Bear Mountain triangulation station.	Big Moose	Hamilton	2,448
Blackbridge	Lake Pleasant	Hamilton	1,052
Black Brook	Ausable	Clinton	1,909
Black Creek Lake, water surface	Wilmurt	Herkimer	1,906
Black Dome	Durham	Greene	3,990
Blackhead	Durham	Greene	3,937
Black Lake, water surface	Brier Hill Hammond	St. Lawrence	272
Black Mountain	Ausable	Essex	2,160
Black Mountain	Thirteenth Lake	Warren	2,725
Black Mountain triangulation station	Bolton	Washington	2,665
Black Pond, water surface	Poughkeepsie	Dutchess	704
Black Pond, water surface	St. Regis	Franklin	1,584
Black River	Theresa	Jefferson	546
Bleecker Center	Gloversville	Fulton	1,376
Blockville	Chautauqua	Chautauqua	1,399
Blodgett Hill	Albany	Albany	1,165
Bloody Pond triangulation station	Greene	Cortland	1,651
Bloomertown	Chautauqua	Chautauqua	1,356
Bloomingburg	Ellenville	Sullivan	516
Bloomingburg station	Ellenville	Sullivan	755
Bloomingdale Hill	Troy	Rensselaer	655
Blueberry Hill	Elizabethtown	Essex	2,323

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Blueberry Mountain	Long Lake	Hamilton	2.337
Blue Corners	Amsterdam	Saratoga	758
Blue Hill	Neversink	Sullivan	2.755
Blue Hill triangulation station	Catskill	Columbia	650
Blue Mountain Lake, water surface	Blue Mountain	Hamilton	1,789
Blue Mountain triangulation station	Blue Mountain	Hamilton	3,759
Blue Point	Fire Island	Suffolk	22
Blue Ridge	Blue Mountain	Hamilton	3.481
Blue Ridge	Paradox Lake	Essex	2,673
Blue Ridge	Raquette Lake	Hamilton	3,460
Blue Ridge (Cloud Cap triangulation station)	Indian Lake	Hamilton	3.865
Blue Ridge Mountain triangulation station	Lake Pleasant	Hamilton	2,865
Blue Store	Catskill	Columbia	186
Bluff Mountain	Ausable	Essex	2,956
Bobell Hill triangulation station	Oxford	Chenango	1.787
Bog Brook Reservoir	Carmel	Putnam	415
Bohemia	Setauket	Suffolk	67
Boice Hill triangulation station	Rhinebeck	Dutchess	749
Boiceville	Slide Mountain	Ulster	609
Bonny Hill	Bath	Steuben	1.755
Bonticou Crag	Rosendale	Ulster	1.180
Boreas Mountain	Mount Marcy	Essex	3.600
Boreas Ponds, water surface	Mount Marcy	Essex	1,973
Borodino	Skaneateles	Onondaga	1,108
Bottle Pond, water surface	Raquette Lake	Hamilton	1.814
Bovina Center	Delhi	Delaware	1,673
Bowerstown	Cooperstown	Otsego	1.327
Bowmansville	Depew	Erie	700
Boyd Corners Reservoir, water surface	West Point	Putnam	593
Boynton triangulation station	Watertown	Jefferson	976
Bozard Hill	Olean	Cattaraugus	2,233
Bradley Brook Reservoir, water surface	Morrisville	Madison	1,428
Bradley Mountain	West Canada Lakes	Hamilton	3,179
Brainerd station	Kinderhook	Columbia	618
Braman Corners	Amsterdam	Schenectady	1.110
Bramley triangulation station	Delhi	Delaware	2,825
Brandreth Lake, water surface	Raquette Lake	Hamilton	1,878
Brandy Lake, water surface	McKeever	Oneida	1.543
Brantingham Lake, water surface	Port Leyden	Lewis	1,235
Brant Lake, surface of water	Bolton	Warren	801
Brasher Falls	Massena	St. Lawrence	290
Breeds Hill	Ticonderoga	Essex	839
Brewster Mountain	Carmel	Putnam	781
Bridgehampton	Sag Harbor	Suffolk	42
Bridge Hill	Rhinebeck	Dutchess	883
Bridgeport	Chittenango	Madison	394
Bridgeville	Monticello	Sullivan	1,157
Bridgewater	Winfield	Oneida	1,187
Brier Hill	Brier Hill	St. Lawrence	336
Brier Hill station	Brier Hill	St. Lawrence	283
Bristol	Canandaigua	Ontario	1,158
Bristol Springs	Naples	Ontario	1,210
Broadalbin Junction	Gloversville	Fulton	812
Broadhead	Rosendale	Ulster	503
Brockway Corners	Kasoag	Oneida	600
Brookdale	Massena	St. Lawrence	322
Brookfield	Sangerfield	Madison	1.381
Brooktrout Lake, water surface	West Canada Lakes	Hamilton	2.363
Brookvale	Binghamton	Broome	1.105
Brookville	Oyster Bay	Nassau	127
Broome Center	Gilboa	Schoharie	1,954
Broughton Ledge	Elizabethtown	Essex	1.963
Browns	Lake Placid	Essex	1,314
Browns Hills	Shelter Island	Suffolk	118
Browns Pond, water surface	Glens Falls	Warren	402
Brown Tract Ponds, water surface	Raquette Lake	Hamilton	1,768
Brownville	Macedon	Ontario	596
Bryants Mill	Loon Lake	Franklin	1,506
Bubb Lake, water surface	Big Moose	Herkimer	1,815
Buckbee Corner	Brockport	Monroe	563
Buckhorn Mountain	Thirteenth Lake	Hamilton	2,860
Buck Island	Lake Placid	Essex	2.188
Buck Mountain	Blue Mountain	Hamilton	2,670
Buck Mountain	Elizabethtown	Essex	2.255
Buck Mountain	Long Lake	Hamilton	2,683

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Buck Mountain	Ticonderoga	Essex	1,558
Buck Mountain triangulation station	Bolton	Washington	2,334
Buck Mountain triangulation station	Stony Creek	Saratoga	2,706
Buck Pond, water surface	Loon Lake	Franklin	1,665
Bucktail Mountain	Luzerne	Warren	1,860
Buckwheat Hill	Berlin	Rensselaer	1,743
Buel	Canajoharie	Montgomery	725
Bug Lake, water surface	Raquette Lake	Hamilton	1,990
Bullhead Pond, water surface	Macedon	Monroe	420
Bullhead Mountain	Thirteenth Lake	Warren	3,455
Bull Hill	West Point	Putnam	1,425
Bull Rock Mountain	Paradox Lake	Essex	1,844
Bumpus triangulation station	Medina	Genesee	738
Burden	Catskill	Columbia	220
Burlingham	Ellenville	Sullivan	400
Burnhams	Dunkirk	Chautauqua	1,314
Burnt Knob	Durham	Greene	3,160
Burnt Hope Lake	Monticello	Sullivan	1,231
Burnt Mountain	Blue Mountain	Hamilton	2,574
Burrell Corners	Little Falls	Herkimer	1,380
Bushnellsville	Phoenicia	Greene	1,437
Busti	Chautauqua	Chautauqua	1,375
Butler Center	Clyde	Wayne	406
Butler Pond, water surface	Glens Falls	Warren	1,020
Butterfield Lake, water surface	Alexandria Bay	Jefferson	276
Butterfly	Fulton	Oswego	410
Buttermilk Hill triangulation station	Tarrytown	Westchester	743
Byram Lake, water surface	Stamford	Westchester	445
Byron Corners	Highmarket	Lewis	1,662
Cafferty Hill triangulation station	Apalachin	Tioga	1,586
Cairo Round Top	Coxsackie	Greene	1,420
Calamity Mountain	Santanoni	Essex	3,641
Cambridge	Cambridge	Washington	471
Camelhump	Gloversville	Fulton	2,278
Camels Hump	Mount Marcy	Essex	2,785
Cameron Pond, water surface	Gloversville	Fulton	1,380
Camp Perkins	Indian Lake	Hamilton	1,695
Campville	Apalachin	Tioga	824
Canachagala Lake, water surface	Old Forge	Herkimer	2,155
Canada Hill	West Point	Putnam	842
Canada Lake, water surface	Lassellsville	Fulton	1,542
Canadarago Lake, water surface	Richfield Springs Winfield	Otsego	1,276
Canadice Lake, water surface	Wayland	Ontario	1,092
Canandaigua Lake, water surface	Canandaigua Naples	Ontario Yates	686
Canawaugus	Caledonia	Livingston	557
Candor	Oswego	Tioga	892
Carl triangulation station	Watertown	Lewis	1,530
Carlton station	Oak Orchard	Orleans	347
Carlyon	Ridgeway	Orleans	332
Caroline	Dryden	Tompkins	1,278
Carterville	Kasoag	Oswego	569
Cary Pond, water surface	Raquette Lake	Hamilton	1,763
Cascade Lake, water surface	Big Moose	Hamilton	1,815
Cascade Lakes, water surface	Mount Marcy	Essex	2,032 2,039
Cascade Mountain	Mount Marcy	Essex	4,092
Cascade Pond, water surface	Blue Mountain	Hamilton	2,143
Casey Mountain	Newcomb	Essex	2,490
Cassadaga Upper Lake, water surface	Dunkirk	Chautauqua	1,306
Cass Hill	Albany	Albany	1,365
Cassville	Sangerfield	Oneida	1,241
Castile	Portage	Wyoming	1,289
Cathead Mountain	Lake Pleasant	Hamilton	2,427
Catlin Lake, water surface	Long Lake	Hamilton Essex	1,597
Cat Mountain	Tupper Lake	Hamilton	2,324
Cat Mountain triangulation station	Bolton	Warren	1,954
Cat Pond, water surface	St. Regis	Franklin	1,557
Catamount	Loon Lake	Franklin	1,706
Catamount Hill	Schroon Lake	Warren	1,655
Catamount Mountain	Bolton	Warren	2,304
Catamount Mountain	Loon Lake	Franklin	2,485
Catamount triangulation station	Lake Placid	Franklin	3,168

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Catskill	Catskill	Greene	97
Cave Mountain	Gilboa	Greene	3,035
Cayuga	Auburn	Cayuga	381
Cayuga Lake, water surface	Ithaca Geneva	Tompkins Seneca	381
Cayuta	Ithaca	Schuyler	1,114
Cayuta Lake, water surface	Ithaca	Schuyler	1,272
Cazenovia Lake, water surface	Cazenovia	Madison	1,190
Cedar Lakes, water surface	West Canada Lakes	Hamilton	2,437
Cedar Mountain	Newcomb	Essex	2,532
Cedar River Flow, water surface	Indian Lake	Hamilton	2,100
Cedarville	Winfield	Herkimer	1,219
Cellar Mountain	Indian Lake West Canada Lakes	Hamilton Hamilton	3,402 3,474
Celoron	Chautauqua	Chautauqua	1,342
Centerfield	Canandaigua	Ontario	944
Center Lisle	Harford	Broome	1,094
Center Moriches	Moriches	Suffolk	31
Center Pond Mountain	Tupper Lake	St. Lawrence	2,469
Center Valley	Canajoharie	Otsego	1,645
Centerville	Angelica	Allegany	1,756
Central Bridge	Schoharie	Schoharie	621
Central Islip	Setauket	Suffolk	88
Central Park	Babylon	Nassau	103
Chadwicks	Oriskany	Oneida	717
Chain Lakes, first, water surface	Blue Mountain	Hamilton	1,595
Chain Lakes, third, water surface	Blue Mountain	Hamilton	1,598
Chain Lakes, third to seventh, inclusive, water surface.	Newcomb	Essex Hamilton	1,598
Chapel Corners	Genoa	Cayuga	804
Chapel Pond, water surface	Elizabethtown	Essex	1,602
Chapinville	Phelps	Ontario	700
Chappaqua	Tarrytown	Westchester	317
Chappaqua Hill	Tarrytown	Westchester	739
Charley Lake, water surface	Lake Pleasant	Hamilton	1,600
Charley Pond, water surface	Tupper Lake	Hamilton	1,776
Charlotte Center	Cherry Creek	Chautauqua	1,539
Charlotte Lake, water surface	Copake	Columbia	651
Charlotteville	Richmondville	Schoharie	1,601
Chase	Cooperstown	Otsego	1,367
Chase Mountain	North Creek	Warren	1,647
Chases	Loon Lake	Franklin	1,759
Chaseville	Cooperstown	Otsego	1,276
Chaumont Bay, water surface	Cape Vincent Clayton	Jefferson	246
Chautauqua Lake, water surface	Chautauqua Dunkirk	Chautauqua	1,308
Chazy Lake, water surface	Lyon Mountain	Clinton	1,531
Chemung	Waverly	Chemung	848
Chenango Lake, water surface	New Berlin	Chenango	1,750
Cheney Cobble	Mount Marcy	Essex	3,673
Cheney Pond, water surface	Schroon Lake	Essex	1,720
Cherry Creek	Cherry Creek	Chautauqua	1,305
Cherry Ridge	North Creek	Warren	2,578
Cherry Valley	Richfield Spgs	Otsego	1,332
Cheshire	Canandaigua	Ontario	1,039
Cheshire triangulation station	Canandaigua	Ontario	1,201
Chestertown	North Creek	Warren	854
Chilson Lake, water surface	Paradox Lake	Essex	951
China Pond, water surface	Carmel	Putnam	770
Chittenango	Chittenango	Madison	457
Chrysler Pond, water surface	Copake	Columbia	576
Chub Pond, water surface	Big Moose	Hamilton	1,978
Chub Pond, water surface	McKeever	Chenango	1,595
Churchill Mountain	Hobart	Delaware	3,950
Cicero	Syracuse	Onondaga	396
Cicero Swamp (east)	Syracuse	Onondaga	395
Cicero Swamp (west)	Syracuse	Onondaga	365
Cincinnatus	Pitcher	Cortland	1,046
Cincinnatus Lake, water surface	Greene	Cortland	1,257
Circleville	Ellenville	Orange	622
Clap Mountain	Elizabethtown	Essex	1,606
Clark	Jamestown	Chautauqua	1,273
Clark Lake, water surface	Cambridge	Washington	470
Clark Mills	Oriskany	Oneida	519
Clark Mountain	Ausable	Essex	1,577

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Clarksburg	Eden	Erie	905
Clarkson	Brockport	Monroe	427
Claverack	Copake	Columbia	209
Clear Lake, water surface	Alexandria Bay	Jefferson	354
Clear Lake, water surface	Big Moose	Herkimer	2,007
Clear Lake, water surface	Mount Marcy	Essex	2,155
Clear Pond, water surface	Blue Mountain	Hamilton	1,720
Clear Pond, water surface	Mount Marcy	Essex	1,911
Clear Pond, water surface	Saranac	Franklin	1,610
Clear Pond, water surface	Saranac	Franklin	1,669
Clear Pond, water surface	Schroon Lake	Essex	1,911
Clements Mountain	Ausable	Essex	2,540
Clermont	Catskill	Columbia	226
Clifford	Fulton	Oswego	436
Clockville	Oneida	Oneida	683
Cleve Mountain	Clove	Dutchess	1,403
Clymer Center	Clymer	Chautauqua	1,525
Clymer Hill	Clymer	Chautauqua	1,826
Coan Pond, water surface	Kasoag	Oswego	612
Cobb Hill	Rochester	Monroe	660
Cobble Hill	Elizabethtown	Essex	1,792
Cobble Hill	Lake Placid	Essex	2,330
Cobble Mountain	Cambridge	Washington	1,462
Cockburn	Catskill	Ulster	171
Cohocton	Bath	Steuben	1,294
Colburns	Chautauqua	Chautauqua	1,321
Colby Pond, water surface	Saranac	Franklin	1,554
Coleman Station	Millbrook	Dutchess	601
Collabar	Ellenville	Orange	594
College Hill	Poughkeepsie	Dutchess	365
Commack	Northport	Suffolk	132
Como Lake, water surface	Moravia	Cayuga	1,306
Conesus	Wayland	Livingston	1,197
Conesus Lake, water surface	Honeoye	Livingston	818
Conesus Lake, water surface	Wayland	Livingston	818
Conesville	Gilboa	Schoharie	1,383
Coney Mountain	Tupper Lake	St. Lawrence	2,297
Conklin	Binghamton	Broome	843
Constable Pond, water surface	Big Moose	Hamilton	1,907
Constantia Center	Kasoag	Oswego	577
Cooks Mountain	Ticonderoga	Essex	1,296
Cooks Reservoir	Broadalbin	Saratoga	1,391
Coon Mountain	Port Henry	Essex	1,009
Coopers Falls	Ogdensburg	St. Lawrence	336
Copake	Copake	Columbia	548
Copake Lake, water surface	Copake	Columbia	715
Copeland Pond	Glens Falls	Washington	447
Cooper Lake, water surface	McKeever	Lewis	1,570
Corbin Hill	Clove	Dutchess	856
Coreys	Long Lake	Franklin	1,611
Corfu Station	Attica	Genesee	878
Cornell Mountain	Phoenicia	Ulster	3,906
Corner Mountain	Thirteenth Lake	Warren	2,340
Corner Pond, water surface	Long Lake	Hamilton	1,720
Cosad	Geneva	Seneca	528
Cossayuna Lake, water surface	Cambridge	Washington	495
Coss Corners	Bath	Steuben	1,782
Cottle Hill	Skaneateles	Cayuga	996
Couch triangulation station	Watkins	Schuyler	1,678
Countryman Hill	Albany	Albany	1,634
County Line Mountain	Thirteenth Lake	Hamilton Warren	3,105
County Line station	Ridgeway	Orleans Niagara	345
Coventry	Oxford	Chenango	1,663
Crains Mills	Cortland	Cortland	1,174
Cranberry Pond, water surface	Lake Placid	Franklin	1,630
Cranberry Pond, water surface	St. Regis	Franklin	1,547
Cranberry Pond, water surface	Schunemunk	Orange	1,012
Crane Mountain triangulation station	North Creek	Warren	3,254
Crane Pond, water surface	Paradox Lake	Essex	1,091
Cranesville	Amsterdam	Montgomery	267
Crawford	Ellenville	Ulster	649
Crippen Pond, water surface	Mexico	Oswego	396
Crittenden	Attica	Erie	845
Cronomer Hill triangulation station	Newburg	Orange	728

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Crooked Lake, water surface	Tully	Onondaga	1,193
Cross Pond, water surface	Stamford	Westchester	521
Crotched Pond, water surface	Indian Lake	Hamilton	1,819
Croton Lake, water surface	Carmel Tarrytown	Westchester	168
Crow Hill	Oriskany	Oneida	1,303
Crown Point	Ticonderoga	Essex	126
Crows Nest	West Point	Orange	1,396
Crum Creek	Lassellsville	Fulton	763
Crumhorn Lake	Cooperstown	Otsego	1,827
Crystal Run	Goshen	Orange	403
Crystal Lake, water surface	Alexandria Bay	Jefferson	376
Crystal Lake, water surface	Blue Mountain	Hamilton	1,873
Crystal Lake, water surface	Lowville	Lewis	1,244
Cuba Hill	Olean	Allegany	2,034
Cullen	Richfield Springs	Herkimer	1,436
Cunningham Hill	Housatonic	Columbia — Berkshire.	1,655
Cunningham Hill	Pittsfield	Columbia	1,655
Cunningham Pond, water surface	North Creek	Warren	831
Cutchogue	Shelter Island	Suffolk	31
Cutknife Mountain	Lake Pleasant	Hamilton	2,495
Cuyler	Pitcher	Cortland	1,227
Cuylerville	Caledonia	Livingston	630
Dalton	Nunda	Livingston	1,367
Danley Corners	Attica	Wyoming	1,344
Dannemora Mountain	Dannemora	Clinton	2,212
Dansville	Wayland	Steuben	703
Dansville station	Wayland	Steuben	1,024
Darien	Attica	Genesee	993
Darien Center	Attica	Genesee	1,018
Dart Lake, water surface	Big Moose	Herkimer	1,762
Davis Mountain	Indian Lake	Hamilton	2,180
Daws	Albion	Genesee	833
Dead Lake, water surface	Cambridge	Washington	537
Death Rock	Whitehall	Washington	827
Debar Mountain triangulation station	Loon Lake	Franklin	3,305
Debar Pond, water surface	Loon Lake	Franklin	1,564
Decatur	Richmondville	Otsego	1,626
Deep Pond, water surface	Morches	Suffolk	23
Deerfield	Utica	Oneida	431
Deerfield Mountain	Ausable	Essex	2,080
Deer Lake, water surface	Old Forge	Hamilton	2,373
Deer Mountain	Elizabethtown	Essex	2,177
Deer Pond, water surface	Big Moose	Hamilton	1,976
Deer Pond, water surface	Blue Mountain	Hamilton	1,620
Deer Pond, water surface	Long Lake	Essex	1,666
Deer Pond, water surface	St. Regis	Franklin	1,588
Defiance Mountain triangulation station	Ticonderoga	Essex	872
Delphi	Cazenovia	Onondaga	945
Demons Pond, water surface	Bath	Steuben	1,566
Dempster Corners	Lassellsville	Fulton	1,491
Denman Mountain triangulation station	Neversink	Sullivan	3,051
Denmark	Carthage	Lewis	974
Denning Hill	West Point	Putnam	1,045
Dennis Hill	Clove	Dutchess	1,365
Dennis Hill	Rhinebeck	Dutchess	563
Denver	Margaretville	Delaware	1,621
Derby	Eden	Erie	698
Deruyter	Cazenovia	Madison	1,284
Devereux triangulation station	Utica	Herkimer	833
Dewells Corners	Depew	Erie	866
Dexter Lake, water surface	Lassellsville	Fulton	1,693
Dial Mountain	Mount Marcy	Essex	4,023
Diamond Lake, water surface	Piseco Lake	Hamilton	2,052
Dickerson Hill triangulation station	West Point	Westchester	810
Dickersons Pond, water surface	West Point	Westchester	282
Dick Hill	Fort Ann	Washington	1,087
Dirgylot Hill	Schroon Lake	Essex	1,360
Discovery Mountain	Ausable	Essex	1,577
Dismal Pond, water surface	Big Moose	Herkimer	2,029
Dix Mountain	Mount Marcy	Essex	4,842
Dorloo	Richmondville	Schoharie	1,171
Doubletop Mountain	Margaretville	Ulster	3,905 3,875

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Drain Pond, water surface	Loon Lake	Franklin	1,545
Drew Pond, water surface	Clove	Putnam	681
Dry Brook Ridge	Margaretville	Delaware	3,510
Dry Channel Pond, water surface	St. Regis	Franklin	1,628
Dryden Lake, water surface	Dryden	Tompkins	1,156
Dryden triangulation station	Dryden	Tompkins	1,888
Duanesburg	Amsterdam	Schenectady	731
Duck Lake, water surface	Bath	Steuben	1,294
Duck Lake, water surface	Long Lake	Franklin	1,787
Duck Pond, water surface	Loon Lake	Franklin	1,642
Dudley Pond, water surface	Paradox Lake	Essex	940
Dug Mountain triangulation station	Indian Lake	Hamilton	3,262
Dugway	Mexico	Oswego	514
Dun Brook Mountain	Blue Mountain	Hamilton	3,565
Duncan Mountain	Lyon Mountain	Clinton-Franklin	2,728
Dundee	Ovid	Yates	982
Dunderberg	West Point	Rockland	865
Durand Hill	Goshen	Orange	850
Durandville	Goshen	Orange	411
Durant Mountain	Thirteenth Lake	Warren	2,425
Durland	Goshen	Orange	548
Dutch Flats	Attica	Wyoming	1,490
Dutch Hill	Tully	Onondaga	1,887
Dutton Mountain	Newcomb	Essex	2,321
Eagle Eyrie	Lake Placid	Essex	2,656
Eagle Hill triangulation station	Chittenango	Onondaga	1,253
Eagle Lake, water surface	Blue Mountain	Hamilton	1,789
Eagle Mountain	Margaretville	Ulster	3,700
Earls	Attica	Wyoming	1,056
East Alexander	Batavia	Genesee	950
East Ashland	Gilboa	Greene	1,456
East Aurora	Depew	Erie	936
East Avon	Honeoye	Livingston	821
East Bennington	Attica	Wyoming	1,343
East Bethany	Batavia	Genesee	1,003
East Bouquet Mountain	Willsboro	Essex	1,219
East Branch Reservoir	Carmel	Putnam	415
East Caroga Lake, water surface	Gloversville	Fulton	1,450
East Chester	Goshen	Orange	485
East Eden	Eden	Eden	1,126
East Elma	Depew	Erie	825
East Florence	Taberg	Oneida	1,013
East Floyd	Boonville	Oneida	979
East Genoa	Genoa	Cayuga	1,094
East Greenwich	Cambridge	Washington	430
East Groveland	Nunda	Livingston	1,241
East Hamilton	Sangerfield	Madison	1,232
East Hamlin	Hamlin	Monroe	290
East Homer	Cortland	Cortland	1,132
East Ithaca	Dryden	Tompkins	872
East Lake, water surface	Lassellsville	Hamilton	1,652
East Lancaster	Depew	Erie	716
East Maine	Binghamton	Broome	1,487
Eastman Hill	Dryden	Tompkins	1,700
East Marion	Shelter Island	Suffolk	30
East Mountain	Slide Mountain	Ulster	2,271
East Norwich	Oyster Bay	Nassau	190
East Park	Rhinebeck	Dutchess	233
East Pembroke	Attica	Genesee	881
East Richford	Harford	Tioga	1,296
East Rushford	Angelica	Allegany	1,405
East Scott	Cortland	Cortland	1,321
East Seneca	Depew	Erie	716
East Shelby triangulation station	Medina	Orleans	670
East Venice	Genoa	Cayuga	1,125
East Virgil	Harford	Cortland	1,147
East X	Geneva	Ontario	479
Eaton Corners	Amsterdam	Schenectady	670
Eaton Hill triangulation station	Oneida	Madison	1,315
Eatonville	Little Falls	Herkimer	763
Ebenezer Mountain	Lake Placid	Essex	1,960
Echo Cliff	Piseco Lake	Hamilton	2,425
Echo Lake, water surface	Greene	Chenango	1,335
Echo Lake, water surface	Indian Lake Lake Pleasant	Hamilton	1,730

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Echo Lake, water surface	Monticello	Sullivan	1,314
Echo Lake, water surface	Schunemunk	Orange	707
Echo Mountain	Santanoni	Essex	2,270
Eddy	Canton	St. Lawrence	401
Edgecomb Pond, water surface	Bolton	Warren	1,045
Edicks	Richfield Springs	Herkimer	848
Edson Corners	Cooperstown	Otsego	1,507
Edwards triangulation station	Medina	Orleans	681
Efner Lake, water surface	Luzerne	Saratoga	1,170
Elba	Albion	Genesee	761
Elbow Mountain	Lake Pleasant	Hamilton	1,784
Elbow Ponds, water surface	Loon Lake	Franklin	1,600
Elbow Range	Loon Lake	Franklin	2,813
Elephant Mountain	Bolton	Washington	1,954
Eleventh Mountain	Thirteenth Lake	Warren	3,303
Elk Creek	Cooperstown	Otsego	1,320
Elk Lake, water surface	Mount Marcy	Essex	1,986
Ellis Mountain	Ausable	Essex	1,773
Ellis Mountain	Lyon Mountain	Clinton	2,093
Ellis Mountain	Paradox Lake	Warren	1,969
Ellis triangulation station	Cortland	Cortland	1,711
Elmbois	Hammondsport	Steuben	1,344
Elm Lake, water surface	Indian Lake	Hamilton	1,728
Ely Mountain	Piseco Lake	Hamilton	2,613
Eminence	Richmondville	Schoharie	2,024
Emmonsburg	Lassellsville	Fulton	1,002
Endicott	Apalachin	Broome	840
Enfield triangulation station	Ithaca	Tompkins	1,464
Enos	Remsen	Oneida	1,296
Erebus Mountain	Bolton	Washington	2,533
Erieville Reservoir	Cazenovia	Madison	1,504
Erin	Waverly	Chemung	1,285
Esopus	Rhinebeck	Ulster	116
Estelle Mountain	Raquette Lake	Hamilton	2,535
Esther Mountain	Lake Placid	Essex	4,270
Etna	Dryden	Tompkins	1,020
Evergreen Mountain	Phoenicia	Greene	3,531
Failing triangulation station	Canajoharie	Montgomery	821
Fairground	Northport	Suffolk	212
Fairoaks	Ellenville	Orange	641
Fairville	Palmyra	Wayne	430
Fallsburg	Monticello	Sullivan	1,179
Falls Lake, water surface	Big Moose	Herkimer	1,683
Fargo	Attica	Genesee	857
Farmington	Macedon	Ontario	558
Fawn Lake, water surface	Lake Pleasant	Hamilton	1,695
Fay Mountain	Ausable	Essex	2,312
Featherstone Lake, water surface	Amsterdam	Schenectady	1,322
Fenner	Cazenovia	Madison	1,543
Fern Lake, water surface	Ausable	Clinton	1,178
Fernwood	Mexico	Oswego	393
Ferris Lake, water surface	Piseco Lake	Hamilton	1,722
Ferrona	Ausable	Clinton	507
Fical Corners	Lassellsville	Fulton	1,379
Findley Lake, water surface	Clymer	Chautauqua	1,421
Fir Mountain	Phoenicia	Ulster	3,619
First Brother Mountain	Bolton	Warren	1,740
First Pond, water surface	Long Lake	Hamilton	1,693
Fish Creek	Highmarket	Lewis	1,610
Fish Hill	Whitehall	Washington	441
Fishing Brook Mountain	Blue Mountain	Hamilton	3,550
Fish Mountain triangulation station	Lake Pleasant	Hamilton	2,473
Fish Pond, water surface	Newcomb	Essex	2,149
Five Corners	Genoa	Cayuga	1,170
Five Corners	Oak Orchard	Orleans	492
Fivemile Mountain	Bolton	Warren	2,258
Flat Creek	Bilboa	Schoharie	1,720
Flatfish Pond, water surface	Raquette Lake	Hamilton	1,788
Flatiron Rock triangulation station	Olean	Cattaraugus	2,387
Fleischmann Mountain	Margaretville	Delaware	2,944
Flemingsville	Apalachin	Tioga	898
Flint	Phelps	Ontario	820
Florence Hill	Kasoag	Oneida	1,073
Fly Pond, water surface	Richmondville	Schoharie	2,080

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Fog Hill	Housatonic Pittsfield	Columbia	1,777
Follensby Clear Pond, water surface	St. Regis	Franklin	1,572
Follensby Junior Pond, water surface	St. Regis	Franklin	1,566
Follensby Pond, water surface	Long Lake	Franklin	1,548
Fordway Mountain	Ausable	Essex	1,425
Forest Lake, water surface	Schunemunk	Orange	1,050
Forestmere Lakes, water surface	St. Regis	Franklin	1,583
Forest Pond, water surface	Copake	Columbia	849
Forestport	Remsen	Oneida	1,142
Forestport station	Remsen	Oneida	1,199
Forked Lake, water surface	Raquette Lake	Hamilton	1,741
Fort Defiance Hill	West Point	Putnam	1,050
Fort Hill	Brockport	Genesee	667
Fort Hill	Goshen	Orange	643
Fortsville	Schuylerville	Saratoga	299
Four Corners	Goshen	Orange	421
Fowlerville	Caledonia	Livingston	640
Fox Hill	Broadalbin	Saratoga	1,566
Fox Hill	Clove	Dutchess	643
Fox Mountain	Raquette Lake	Hamilton	2,040
Frank Pond, water surface	Newcomb	Essex	1,694
Franks Corners	Harford	Cortland	1,228
Freetown Corners	Cortland	Cortland	1,332
Fremont Hill	Lake Placid	Franklin	1,859
French Creek	Clymer	Chautauqua	1,416
French Mountain	Glens Falls	Warren	1,522
French Mountain village	Glens Falls	Warren	548
Frenchs	Lake Placid	Franklin	1,664
Frensburg	Jamestown	Chautauqua	1,297
Friends Lake, water surface	North Creek	Warren	915
Fulton Chain Lakes, First Lake to Third Lake, inclusive, water surface.	Old Forge	Herkimer	1,706
Fulton Chain Lakes, Fourth Lake, water surface.	Big Moose	Herkimer	1,707
Fulton Chain, Fifth Lake, water surface	Old Forge	Hamilton	1,707
Fulton Chain, Sixth Lake, water surface	Old Forge	Hamilton	1,785
Fulton Chain, Eighth Lake, water surface	Raquette Lake	Hamilton	1,788
Fultonham	Schoharie	Schoharie	703
Furlough Lake, water surface	Margaretville	Ulster	2,219
Gage	Penn Yan	Yates	862
Gage Mountain	North Creek	Warren	2,055
Gaines	Oak Orchard	Orleans	426
Gainesville	Portage	Wyoming	1,616
Gannett Hill triangulation station	Naples	Ontario	2,256
Gardnerville	Goshen	Orange	421
Garfield Mountain	Phoenicia	Ulster	2,532
Garoga	Lassellsville	Fulton	985
Gaskill	Apalachin	Tioga	1,032
Gayville	Mexico	Oswego	474
Genegantslet	Greene	Chenango	1,011
Genesee Valley Junction	Honeoye	Monroe	542
Geneseo	Caledonia	Livingston	892
Genung	Albion	Orleans	700
Georgetown	Greene	Cortland	1,157
Georgia Mountain	Stony Creek	Warren	2,424
German	Greene	Chenango	1,605
Getzville	Tonawanda	Erie	586
Ghent	Kinderhook	Columbia	397
Giant Ledge	Phoenicia	Ulster	3,218
Giant Mountain	Elizabethtown	Essex	4,622
Gilman Lake, water surface	Lake Pleasant	Hamilton	1,673
Ginseng Mountain	Durham	Greene	3,790
G Lake, water surface	Piseco Lake	Hamilton	2,031
Glasgow Mills	Lassellsville	Fulton	1,588
Glen Aubrey	Harford	Broome	992
Glen Lake, water surface	Glens Falls	Warren	402
Glenmere Lake, water surface	Goshen	Orange	532
Glenmore	Taberg	Oneida	889
Glenville	Amsterdam	Schenectady	710
Glenville	Honeoye	Livingston	949
Glory Hill	Waverly	Chemung	1,571
Goodenow Mountain	Newcomb	Essex	2,693
Goodenow Pond, water surface	Newcomb	Essex	1,651

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Good Ground	Riverhead	Suffolk	60
Goodyears	Genoa	Cayuga	931
Goose Pond Mountain	Goshen	Orange	1,100
Gore Mountain triangulation station	Thirteenth Lake	Warren	3,595
Goshen Reservoir	Goshen	Orange	543
Gospel Hill	Oxford	Chenango	1,728
Gothic Mountain	Mount Marcy	Essex	4,738
Graham Mountain	Margaretville	Ulster	3,890
Grahams Church	Ellenville	Orange	474
Grampus Lake, water surface	Long Lake	Hamilton	1,745
Granby Center	Fulton	Oswego	435
Grandview Hill	Troy	Rensselaer	420
Granger	Angelica	Allegany	1,944
Grant	Chautauqua	Chautauqua	1,435
Grant	Remsen	Herkimer	1,228
Grant Mills	Margaretville	Delaware	1,646
Grass Lake, water surface	Hammond	St. Lawrence	323
Grassy Pond, water surface	Blue Mountain	Hamilton	1,628
Grays Millpond, water surface	Mexico	Oswego	423
Great River Station	Fire Island	Suffolk	30
Great Valley	Salamanca	Cattaraugus	1,460
Greece	Rochester	Monroe	432
Greene Mountain	Elizabethtown	Essex	3,928
Greene triangulation station	Watertown	Lewis	1,443
Greenfield	Ellenville	Ulster	898
Greenfield Center	Saratoga	Saratoga	686
Green Hill	Schroon Lake	Warren	2,227
Greenhurst	Chautauqua	Chautauqua	1,321
Green Lake, water surface	Tully	Onondaga	1,190
Greenlawn	Northport	Suffolk	226
Greenvale	Oyster Bay	Nassau	138
Greenwich Point	Hempstead	Nassau	42
Greigsville	Caledonia	Livingston	766
Griffith	Chautauqua	Chautauqua	1,319
Guideboard Hill	Lake Pleasant	Hamilton	2,225
Gulf Summit	Nineveh	Broome	1,374
Gulicksville	Penn Yan	Steuben	1,057
Gull Lake, water surface	McKeever	Herkimer	1,779
Gull Pond, water surface	Tupper Lake	Franklin St. Lawrence	1,561
Gurnspring	Schuylerville	Saratoga	316
Guymard Lake, water surface	Port Jervis	Orange	712
Guyot Hill	Rosendale	Ulster	1,260
Guyunoga	Penn Yan	Yates	772
Hackenback Mountain	North Creek	Warren	1,370
Hall Corners	Genoa	Seneca	1,124
Hall Pond, water surface	St. Regis	Franklin	1,617
Halls Corners	Phelps	Ontario	881
Halstead	Copake	Columbia	608
Hamilton Lake, water surface	Lake Pleasant	Hamilton	1,850
Hamilton Mountain	Lake Pleasant	Hamilton	3,250
Hamlet	Cherry Creek	Chautauqua	1,399
Hamlin Corner	Canandaigua	Ontario	993
Hamlin Mountain	Lake Placid	Essex	2,122
Hammond Pond, water surface	Paradox Lake	Essex	984
Hamptonburg	Goshen	Orange	436
Hampton Hill	Whitehall	Washington	642
Handsome Pond, water surface	Long Lake	Hamilton	1,776
Hanks Pond, water surface	Big Moose	Herkimer	1,781
Harbor Hill	Oyster Bay	Nassau	391
Harpersfield	Hobart	Delaware	1,752
Harpursville	Nineveh	Broome	1,017
Harrington Mountain	Thirteenth Lake	Warren	2,350
Harrisburg Lake, water surface	Stony Creek	Warren	1,494
Harris Hill	Elizabethtown	Essex	2,190
Harris Hill	Depew	Erie	714
Harris Lake, water surface	Newcomb	Essex	1,552
Hartland	Lockport	Niagara	405
Hastings station	Mexico	Oswego	466
Hatch Hill	Whitehall	Washington	1,014
Hatch Lake, water surface	Morrisville	Madison	1,468
Hauppauge	Setauket	Suffolk	78
Haven	Monticello	Sullivan	531
Hawk Pond, water surface	Big Moose	Herkimer	2,113

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Hayes Mountain	Schroon Lake	Essex	2,822
Haystack Mountain	Lyon Mountain	Clinton	1,928
Haystack Mountain	Ausable	Essex	1,338
Haystack Mountain	Mount Marcy	Essex	4,918
Heath Mountain	North Creek	Warren	1,265
Hebron Mountain	Cambridge	Washington	1,057
Hector triangulation station	Watkins	Schuyler	1,800
Hedgehog Hill	Schroon Lake	Essex	1,623
Hedges Lake, water surface	Cambridge	Washington	535
Height of Land Mountain	Thirteenth Lake	Warren	3,050
Helldevil Dam	Lake Pleasant	Hamilton	2,281
Hellgate Ponds, water surface	McKeever	Herkimer	1,749 1,756
Hemlock	Honeoye	Livingston	922
Hemlock Church	Bath	Steuben	1,830
Hemlock Lake, water surface	Honeoye Wayland	Livingston Ontario	896
Hemlock Lake, water surface	Monticello	Sullivan	1,290
Hemlock Mountain	Phoenicia	Ulster	3,264
Henderson Mountain	North Creek	Warren	2,045
Henderson Pond, water surface	Sacketts Harbor	Jefferson	310
Henrietta	Rochester	Monroe	600
Herron Hill	Bath	Steuben	1,656
Hewitt Pond, water surface	Schroon Lake	Essex	1,692
Hickory Lake, water surface	Hammond	St. Lawrence	319
Higgins	Angelica	Allegany	1,515
High Falls	Rosendale	Ulster	210
High Knob	Gilboa	Schoharie	2,640
Highland Lake, water surface	Goshen	Orange	790
Highmarket	Highmarket	Lewis	1,786
High Nopit	Bolton	Warren	1,650
High Peak	Kaaterskill	Greene	3,600
High Point	Ellenville	Ulster	2,246
High Point	Slide Mountain	Ulster	3,075
High Pond, water surface	Raquette Lake	Hamilton	1,785
High Tor triangulation station	Tarrytown	Rockland	832
Hillabrandt	Lassellsville	Fulton	1,571
Hillsboro	Kasoag	Oneida	618
Hillsdale	Copake	Columbia	686
Himrod	Ovid	Yates	783
Hinckley	Remsen	Oneida	1,168
Hinckley Lake, water surface	Wilmurt	Herkimer	1,374
Hoffman Mountain	Schroon Lake	Essex	3,715
Holbrook	Setauket	Suffolk	115
Holcomb	Canandaigua	Ontario	877
Holcomb Mountain	Elizabethtown	Essex	2,326
Hollenbeck Hill triangulation station	Troy	Rensselaer	638
Hollowville	Copake	Columbia	311
Holmes Lake, water surface	Gloversville	Fulton	1,844
Holmesville	New Berlin	Chenango	1,053
Homer	Cortland	Cortland	1,146
Honeoye Lake, water surface	Honeoye Wayland	Ontario	800
Honey Hill	Richmondville	Otsego	2,050
Honk Lake, water surface	Slide Mountain	Ulster	572
Honnedaga Lake, water surface	Old Forge	Herkimer	2,187
Hook Mountain	Tarrytown	Rockland	730
Hooper	Apalachin	Broome	834
Hope Pond, water surface	Loon Lake	Franklin	1,712
Hornby triangulation station	Watkins	Schuyler	2,045
Horseshoe Lake, water surface	Tupper Lake	St. Lawrence	1,723
Horseshoe Mountain	Thirteenth Lake	Hamilton	2,848
Horseshoe Pond, water surface	Big Moose	Herkimer	2,067
Horseshoe Pond, water surface	St. Regis	Franklin	1,574
Horseshoe Pond, water surface	Schroon Lake	Essex	1,288
Howard Mountain	Lyon Mountain	Franklin	1,978
Hoyt Corners	Ovid	Seneca	794
Hubbard Hill	Gilboa	Schoharie	2,630
Hubbard Hill	Owego	Tioga	1,644
Hubbardville	Owego	Tioga	877
Hubert triangulation station	Cortland	Cortland	1,565
Huckleberry Hill	Cambridge	Washington	1,380
Huckleberry Mountain	North Creek	Warren; Chester township.	1,352

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Huckleberry Mountain	North Creek	Warren; Johnsburg township.	2,441
Hume	Angelica	Allegany	1,281
Humphrey Center	Salamanca	Cattaraugus	1,663
Hungerford triangulation station	Dryden	Tompkins	1,280
Hunt Hill	Casenovia	Madison	2,003
Hunter Mountain	Kaaterskill	Greene	4,025
Huntersfield Mountain	Gilboa	Greene	3,450
Huntersland	Schoharie	Schoharie	1,167
Huntley Pond, water surface	Newcomb	Essex	1,575
Hurricane Mountain	Elizabethtown	Essex	3,687
Huzzyhill	Rhinebeck	Ulster	933
Hyde Lake, water surface	Theresa	Jefferson	382
Hyde Park	Rhinebeck	Dutchess	187
Hydeville	Greene	Broome	1,394
Hyndsville	Richmondville	Schoharie	1,117
Ilion triangulation station	Utica	Herkimer	550
Independence Lake, water surface	Big Moose	Herkimer	1,934
Indian Head	Lake Pleasant	Hamilton	2,443
Indian Head Mountain	Kaaterskill	Greene	3,585
Indian Hill	Stamford	Westchester	677
Indian Lake, water surface	Blue Mountain Indian Lake	Hamilton	1,650
Indian Lake	Old Forge	Hamilton	2,144
Indian Mountain	Bolton	Warren	1,605
Ingham Mills station	Little Falls	Herkimer	604
Ingleside	Naples	Steuben	1,498
Inman	Loon Lake	Franklin	1,733
Ionia	Canandaigua	Ontario	894
Irish settlement	Lassellsville	Fulton	1,451
Irona	Mooers	Clinton	606
Irondequoit Bay, water surface	Rochester	Monroe	247
Iron Mountain	Elizabethtown	Essex	1,960
Iroquois	Eden	Erie	670
Irving Pond, water surface	Gloversville	Fulton	1,697
Island Pond, water surface	Schunemunk	Orange	967
Islip	Fire Island	Suffolk	19
Italy Hill	Penn Yan	Yates	1,606
Jabe Pond, water surface	Bolton	Warren	1,265
Jackson Summit	Gloversville	Fulton	1,254
Jackson triangulation station	Utica	Herkimer	1,420
Jaclyn Hill	Hobart	Delaware	2,370
Jakman Hill	Honeoye	Livingston	1,194
Jamesport	Riverhead	Suffolk	22
Jamison Road	Depew	Erie	886
Jaquins	Clymer	Chautauqua	1,472
Jay	Ausable	Essex	644
Jay Mountain	Ausable	Essex	3,601
Jeffers Mountain	Luzerne	Saratoga	1,405
Jefferson	Hobart	Schoharie	1,868
Jenkins Pond, water surface	Long Lake	Franklin	1,731
Jenksville	Harford	Tioga	1,038
Jerseyfield Lake, water surface	Wilmurt	Hamilton Herkimer	1,993
Jerseyfield Mountain	Piseco Lake	Herkimer	2,310
Jewett Hill	Moravia	Cayuga	1,448
Jewettville	Depew	Erie	851
Joe Gee Hill	Goshen	Orange	824
John Mack Pond, water surface	Indian Lake	Hamilton	1,746
Johnsburg	North Creek	Warren	1,295
Johnson triangulation station	Watertown	Jefferson	1,033
Jones Hill	Schroon Lake	Essex	1,928
Jones Lake, water surface	Old Forge	Hamilton	2,257
Jones Pond, water surface	Saranac	Franklin	1,652
Jordanville	Richfield Springs	Herkimer	1,499
Junction	Batavia	Genesee	951
Kaisertown	Ellenville	Orange	448
Kays Hill	Newcomb	Essex	2,135
Keene	Lake Placid	Essex	857
Keeney	Cazenovia	Cortland	1,208
Keeney Mountain	Ticonderoga	Essex	1,585
Kelley station	Amsterdam	Schenectady	484

Locality.	Quadrangle.	County.	Elevation. Feet.
Kelly Corners	Margaretville	Delaware	1,388
Kelm Mountain	North Creek	Warren	1,623
Kempshall Mountain triangulation station	Long Lake	Hamilton	3,360
Kennels Pond, water surface	Piseco Lake	Hamilton	1,753
Kensico Reservoir, water surface	Tarrytown	Westchester	250
Ketchumville	Harford	Tioga	1,251
Kettle Hill	Margaretville	Delaware	2,211
Kettle Mountain	Newcomb	Essex	1,950
Keuka Lake, water surface	Hammondsport Penn Yan	Steuben Yates	709
Key Hill	Ithaca	Tompkins	1,559
Kiamesha Lake, water surface	Monticello	Sullivan	1,385
Kibby Lake, water surface	Kasoag	Oswego	472
Killawog	Harford	Broome	999
Kinderhook Lake, water surface	Kinderhook	Columbia	288
King Corners	Clymer	Chautauqua	1,811
Kings Corners	Ogdensburg	St. Lawrence	346
Kings Park	Northport	Suffolk	173
Kipps	Goshen	Orange	390
Kirk Lake, water surface	West Point	Putnam	683
Kirkville	Chittenango	Onondaga	434
Kirkville triangulation station	Chittenango	Onondaga	507
Kirkwood	Binghamton	Broome	882
Kitty Cobble	West Canada Lake	Hamilton	3,235
Klondike (Worth post office)	Watertown	Jefferson	1,239
Knapp Hill	Lake Placid	Essex	2,328
Knappville	Lassellsville	Fulton	1,389
Knob Mountain	Paradox Lake	Essex	2,032
Knoblock Mountain	Elizabethtown	Essex	3,182
Kortright	Delhi	Delaware	1,776
Kumjamuk Mountain	Indian Lake	Hamilton	2,945
Labrador Pond, water surface	Tully	Onondaga	1,194
Lacona	Pulaski	Oswego	555
Lagrange	Batavia	Wyoming	1,318
Lagrange	Goshen	Orange	367
Lake Awosting, water surface	Ellenville	Ulster	1,867
Lake Champlain, water surface	Plattsburg	Clinton Essex	95
Lake Clear, water surface	Saint Regis	Franklin	1,610
Lake Colden, water surface	Mount Marcy	Essex	2,764
Lake Erie, water surface	Buffalo Dunkirk Silver Creek Westfield	Erie-Chautauqua	573
Lake George, water surface	Bolton Glen Falls Ticonderoga	Essex-Warren	322
Lake Glenida, water surface	Carmel	Putnam	505
Lake Hammersley, water surface	Clove	Dutchess	815
Lake Kushaqua, water surface	Loon Lake	Franklin	1,665
Lake Kushaqua station	Loon Lake	Franklin	1,672
Lake Lauderdale, water surface	Cambridge	Washington	530
Lake Lila, water surface	Big Moose Raquette Lake	Hamilton	1,714
Lake Luzerne, water surface	Luzerne	Warren	624
Lake Mahopac, water surface	Carmel	Putnam	660
Lake Marian, water surface	Tupper Lake	St. Lawrence	1,989
Lake Neathawanta, water surface	Fulton	Oswego	363
Lake of the Woods, water surface	Hammond	Jefferson	329
Lake Ontario, water surface	Cape Vincent and 15 others.	Jefferson	246
Lake Pleasant, water surface	Lake Pleasant	Hamilton	1,724
Lake Placid, water surface	Lake Placid	Essex	1,864
Lakeport	Chittenango	Madison	390
Lake Rondaxe, water surface	Big Moose	Herkimer	1,717
Lake Salubria, water surface	Bath	Steuben	1,088
Lakeside	Macedon	Wayne	365
Lakes Pond, water surface	Glens Falls	Washington	859
Lake Tonetta, water surface	Carmel	Putnam	444
Lake View	Eden	Erie	741
Lakeville	Greene	Chenango	1,289
Lakeville	Honeoye	Livingston	825
Lamoka Lake, water surface	Hammondsport	Schuyler	1,093
Lamont	Portage	Wyoming	1,531

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Langford	Eden	Erie	1,295
Lansing	Fulton	Oswego	411
Lansingville	Genoa	Tompkins	1,042
Latham Pond, water surface	Long Lake	Essex	1,722
Lattintown	Newburg	Ulster	424
Lawrenceville	Catskill	Greene	385
Lawyersville	Richmondville	Schoharie	1,191
Learn triangulation station	Olean	Cattaraugus	2,275
Ledyard	Genoa	Cayuga	990
Lee	Taberg	Oneida	504
Lehigh	Attica	Genesee	893
Lens Lake, water surface	Stony Creek	Warren	1,837
Leonard Hill	Gilboa	Schoharie	2,611
Leraysville	Theresa	Jefferson	532
Levanna	Auburn	Cayuga	424
Levant	Jamestown	Chautauqua	1,251
Lewey Lake, water surface	Indian Lake	Hamilton	1,650
Lewey Mountain	Indian Lake	Hamilton	3,740
Lewis	Ausable	Essex	669
Lily Lake, water surface	Lassellsville	Fulton	1,542
Lilly Lakes, water surface	Binghamton	Broome	900
Limekiln Lake, water surface	Old Forge	Hamilton Herkimer	1,890
Limekiln Mountain	Ausable	Essex	2,925
Lincoln	Macedon	Wayne	503
Lincoln Pond, water surface	Elizabethtown	Essex	1,050
Lindsley Corners	Gloversville	Fulton	1,472
Linwood	Caledonia	Livingston	934
Lisle	Harford	Broome	974
Lithgow	Millbrook	Dutchess	856
Little Bad Luck Pond, water surface	Newcomb	Essex	1,651
Little Clear Pond, water surface	St. Regis	Franklin	1,594
Little Crow Mountain	Ausable	Essex	2,697
Little Far Mountain	Elizabethtown	Essex	1,750
Little Forked Lake, water surface	Raquette Lake	Hamilton	1,741
Little Lake, water surface	Hammondsport	Schuyler	1,096
Little Moose Lake, water surface	Old Forge	Herkimer	1,788
Little Moose Lake, water surface	West Canada Lakes.	Hamilton	2,109
Little Moose Mountain triangulation station	West Canada Lakes.	Hamilton	3,630
Little Mountain	North Creek	Warren	2,438
Little Pisgah Mountain	Newcomb	Essex	2,022
Little Pond, water surface	Clove	Dutchess	901
Little Raven Hill	Elizabethtown	Essex	1,400
Little Rock Pond, water surface	Big Moose	Herkimer	1,764
Little Rogers Pond, water surface	Schroon Lake	Essex	1,267
Little Safford Lake, water surface	Big Moose	Herkimer	1,737
Little Salmon Lake, water surface	Raquette Lake	Hamilton	1,759
Little Simon Pond, water surface	Long Lake	Franklin	1,788
Little Tor	Tarrytown	Westchester	710
Little Tupper Lake, water surface	Tupper Lake	Hamilton	1,718
Little Wolf Pond, water surface	St. Regis	Franklin	1,542
Little Woodhull Lake, water surface	Old Forge	Herkimer	1,835
Little York	Goshen	Orange	403
Livingston	Catskill	Columbia	198
Livingston Lake, water surface	Stony Creek	Saratoga	1,863
Lloyd Hill triangulation station	Rhinebeck	Dutchess	606
Lockport Junction	Tonawanda	Niagara	624
Lodi	Ovid	Seneca	1,045
Lodi Center	Ovid	Seneca	1,284
Lonesome Pond, water surface	Saranac	Franklin	1,527
Long Lake, water surface	Blue Mountain	Hamilton	1,629
Long Lake, water surface	Long Lake	Hamilton	1,630
Long Lake, water surface	McKeever	Oneida	1,467
Long Lake, water surface	Piseco Lake	Hamilton	2,183
Long Pond, water surface	Blue Mountain	Essex Hamilton	1,596
Long Pond, water surface	Carmel	Putnam	650
Long Pond, water surface	Copake	Columbia	501
Long Pond, water surface	Greene	Chenango	1,234
Long Pond, water surface	Hoosick	Rensselaer	1,499
Long Pond, water surface	Indian Lake	Hamilton	1,864
Long Pond, water surface	Kasoag	Oswego	647
Long Pond, water surface	Long Lake	Franklin	1,973
Long Pond, water surface	Rhinebeck	Dutchess	345
Long Pond, water surface	St. Regis	Franklin	1,614
Long Pond, water surface	Schunemunk	Orange	707

Locality	Quadrangle.	County.	Elevation.
			Feet.
Long Pond, water surface	Tupper Lake	St. Lawrence	1,683
Long Pond, water surface	Willsboro	Essex	580
Longwood	Attica	Genesee	882
Lookout Mountain	Lake Pleasant	Hamilton	2,204
Lookout Mountain triangulation station	Loon Lake	Franklin	2,714
Loon Pond, water surface	Tupper Lake	Hamilton	1,915
Looneyville	Depew	Erie	780
Looneyville station	Depew	Erie	763
Loon Lake, water surface	Big Moose	Herkimer	1,674
Loon Lake, water surface	Loon Lake	Franklin	1,712
Loon Lake, water surface	North Creek	Warren	866
Loon Lake Mountains	Loon Lake	Franklin	3,355
Loon Lake station	Loon Lake	Franklin	1,733
Lorena	Boonville	Oneida	503
Lorraine	Watertown	Jefferson	988
Lotville	Lassellsville	Fulton	1,139
Loucks Pond, water surface	Bath	Steuben	1,654
Loughberry Lake, water surface	Saratoga	Saratoga	283
Louisville	Waddington	St. Lawrence	217
Lower Ausable Lake, water surface	Mount Marcy	Essex	1,961
Lower Pond, water surface	Long Lake	Hamilton	1,778
Lowville	Carthage	Lewis	870
Ludlow Pond, water surface	Oxford	Chenango	1,447
Lutheranville	Richmondville	Schoharie	1,896
Lykers	Fonda	Montgomery	1,040
Lyndonville	Ridgeway	Orleans	328
Lynn Church	Bath	Steuben	1,545
Lyon Mountain triangulation station	Lyon Mountain	Clinton	3,830
Lyons Falls	Port Leyden	Lewis	843
Lyonsville Pond, water surface	Rosendale	Ulster	663
Lysander	Baldwinsville	Onondaga	416
McComb Mountain	Mount Marcy	Essex	4,425
McConnellsville	Taberg	Oneida	487
McDonough triangulation station	Greene	Chenango	1,699
Macedon	Macedon	Wayne	447
Macedon Center	Macedon	Wayne	554
Macedon Station	Macedon	Wayne	466
McGinn Hill triangulation station	Newcomb	Hamilton	2,065
McGraw	Cortland	Cortland	1,150
McGregor Mountain	Hobart	Delaware	3,253
MacIntyre Mountain	Mount Marcy	Essex	5,112
McKee Reservoir, water surface	Monticello	Sullivan	1,620
McKenzie Mountain triangulation station	Saranac	Essex	3,872
McKenzie Pond, water surface	Saranac	Essex	1,657
Mackey	Gilboa	Schoharie	1,942
McMillen Corners	Canandaigua	Ontario	842
McNalls	Lockport	Niagara	656
MacNaughton Mountain	Santanoni	Essex	3,976
Madalin	Catskill	Dutchess	152
Madison Reservoir, water surface	Morrisville	Madison	1,211
Madrid Springs	Canton	St. Lawrence	302
Mahopac Lake, water surface	West Point	Putnam	660
Malcolm	Clyde	Seneca	502
Mallory station	Mexico	Oswego	444
Manlius station	Syracuse	Onondaga	416
Manningville	Harford	Broome	1,053
Mannsville	Pulaski	Jefferson	563
Mannsville triangulation station	Pulaski	Jefferson	722
Manny Corners	Amsterdam	Montgomery	675
Manorkill Falls	Gilboa	Schoharie	1,216
Manorton	Catskill	Columbia	245
Manorville	Moriches	Suffolk	46
Mapes Corners	Goshen	Orange	452
Maple Hill	Waverly	Chemung	1,569
Maple Springs	Chautauqua	Chautauqua	1,325
Mapletown triangulation station	Canajoharie	Montgomery	1,213
Maratanza Lake, water surface	Ellenville	Ulster	2,233
Marble Mountain	Lake Placid	Essex	2,725
Marengo	Clyde	Wayne	422
Margaretville	Margaretville	Delaware	1,325
Mariaville Pond, water surface	Amsterdam	Schenectady	1,298
Marilla	Depew	Erie	844
Marion Hill	Fort Ann	Washington	821
Marks	Clymer	Chautauqua	1,464

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Marshville	Canajoharie	Montgomery	671
Martindale	Copake	Columbia	639
Martin Lake, water surface	Port Jervis	Orange	438
Martville	Oswego	Oswego	367
Marvin	Clymer	Chautauqua	1,457
Mason Hill	Stony Creek	Hamilton	1,770
Mason Lake, water surface	Indian Lake	Hamilton	1,793
Massena	Massena	St. Lawrence	207
Mastens Lake, water surface	Monticello	Sullivan	1,563
Mattituck Hills	Shelter Island	Suffolk	178
Maybrook	Schunemunk	Orange	396
Mayfield	Gloversville	Fulton	867
Mays Pond, water surface	Big Moose	Hamilton	1,894
Maysville	Clymer	Chautauqua	1,333
Mechanicstown	Goshen	Orange	482
Meco Lake, water surface	Lake Pleasant	Hamilton	2,107
Melville	Northport	Suffolk	129
Memphis	Baldwinsville	Onondaga	408
Mendon Pond, water surface	Rochester	Monroe	662
Meredith	Delhi	Delaware	2,190
Meridian	Weedsport	Cayuga	452
Merrifield	Auburn	Cayuga	1,055
Merry triangulation station	Utica	Herkimer	1,328
Mertensia	Canandaigua	Ontario	665
Messengerville	Harford	Cortland	1,055
Metcalf Lake, water surface	Piseco Lake	Hamilton	2,378
Middle Branch reservoir	Carmel	Putnam	372
Middlefield Center	Richfield Springs	Otsego	1,659
Middlegrove	Saratoga	Saratoga	548
Middle Lake, water surface	Stony Creek	Hamilton	1,504
Middle Mountain	Bolton	Warren	1,873
Milford Center	Cooperstown	Otsego	1,200
Millbrook	Millbrook	Dutchess	565
Mill Brook Ridge	Margaretville	Ulster	3,380
Mill Creek Pond, water surface	Thirteenth Lake	Warren	1,457
Miller Pond, water surface	Copake	Columbia	516
Millers Mills	Winfield	Herkimer	1,343
Millersport	Lockport	Erie	582
Mill Grove	Depew	Erie	777
Mill Pond, water surface	Hoosick	Rensselaer	1,473
Millsite Lake, water surface	Alexandria Bay	Jefferson	301
Millwood	Tarrytown	Westchester	345
Milo	Ovid	Yates	853
Mina	Clymer	Chautauqua	1,600
Minaville	Amsterdam	Montgomery	610
Mine Hill	Hobart	Schoharie	2,820
Mink Pond, water surface	Newcomb	Essex	1,670
Minnewaska Lake, water surface	Newburg	Orange	1,650
Minnow Pond	Blue Mountain	Hamilton	2,006
Mitchellsville	Bath	Steuben	1,364
Mohansic Lake, water surface	West Point	Westchester	450
Mohegan Lake, water surface	Long Lake	Hamilton	1,763
Mohegan Lake, water surface	West Canada Lakes	Hamilton	2,028
Mohegan Lake, water surface	West Point	Westchester	447
Mombaccus	Slide Mountain	Ulster	660
Mombaccus Mountain	Slide Mountain	Ulster	3,000
Mombasha Lake, water surface	Schunemunk	Orange	857
Monhagen Lake, water surface	Goshen	Orange	713
Mongaup Pond, water surface	Neversink	Sullivan	2,138
Monks Hill	Phoenicia	Delaware	2,483
Montague	Carthage	Lewis	1,618
Montgomery	Newburg	Orange	388
Mooers	Mooers	Clinton	388
Mooers Junction	Mooers	Clinton	280
Moon Hill	Hoosick	Rensselaer	1,432
Moon Lake, water surface	Hammond	Jefferson	389
Moon Mountain	North Creek	Warren	1,463
Moore Hill	Whitehall	Washington	1,055
Moose Island	Lake Placid	Essex	2,254
Moose Mountain	Mount Marcy	Essex	2,766
Moose Mountain	Paradox Lake	Essex	2,439
Moose Mountain	Thirteenth Lake	Warren	2,050
Moose Mountain triangulation station	Saranac	Essex	3,921
Moose Pond, water surface	Newcomb	Essex	2,086
Moose Pond, water surface	Raquette Lake	Hamilton	1,781

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Moose Pond, water surface	Santanoni	Essex	1,785
Moose Pond, water surface	Santanoni	Essex	2,234
Moose Pond, water surface	Saranac	Essex	1,548
Moreau Pond, water surface	Schuylerville	Saratoga	341
Morehead triangulation station	Cortland	Cortland	1,864
Morehouse Lake, water surface	Piseco Lake	Hamilton	1,975
Morgan Lake, water surface	Poughkeepsie	Dutchess	210
Morganville	Albion	Genesee	865
Morley	Canton	St. Lawrence	336
Mormon Hill	Palmyra	Ontario	700
Morrisville station	Morrisville	Madison	1,226
Moss Hill	Macedon	Wayne	610
Moss Lake, water surface	Big Moose	Herkimer	1,757
Mount Adam	Goshen	Orange	587
Mountain Lake, water surface	Gloversville	Fulton	1,577
Mountain Pond, water surface	Big Moose	Herkimer	2,000
Mountain Pond, water surface	Loon Lake	Franklin	1,826
Mountain Pond, water surface	Saint Regis	Franklin	1,632
Mountain Spring Lake, water surface	North Creek	Warren	900
Mountain View	Loon Lake	Franklin	1,498
Mount Anthony	Luzerne	Saratoga	1,664
Mount Blue	Thirteenth Lake	Warren	2,925
Mount Colden	Mount Marcy	Essex	4,713
Mount Colfax	Cambridge	Washington	1,270
Mount Colvin	Mount Marcy	Essex	4,074
Mount Etna	Dannemora	Clinton	1,508
Mount Eve triangulation station	Goshen	Orange	1,057
Mount Francisco	Lake Pleasant	Hamilton	2,318
Mount Hayden	Durham	Greene	2,930
Mount Herman	Olean	Cattaraugus	2,240
Mount Hope	Port Jervis	Orange	822
Mount Lona	Ogdensburg	St. Lawrence	456
Mount Marcy (the highest point in the State)	Mount Marcy	Essex	5,344
Mount Marion triangulation station	Catskill	Ulster	719
Mount Merino triangulation station	Catskill	Columbia	548
Mount Morris triangulation station	Loon Lake	Franklin	3,163
Mount Orrey	Lake Pleasant	Hamilton	2,646
Mount Pisgah triangulation station	Durham	Greene	2,885
Mount Pisgah triangulation station	Margaretville	Delaware	3,365
Mount Pleasant	Dryden	Tompkins	1,762
Mount Pleasant	Phoenicia	Ulster	2,900
Mount Pleasant station	Phoenica	Ulster	713
Mount Rafinesque	Cohoes	Rensselaer	1,197
Mount Redfield	Mount Marcy	Essex	4,606
Mount Riga	Millbrook	Columbia	764
Mount Rouge	Lake Pleasant	Hamilton	2,117
Mount Sabattis	Blue Mountain	Hamilton	2,780
Mount Sinai	Setauket	Suffolk	24
Mount Skylight	Mount Marcy	Essex	4,920
Mount Tobias	Kaaterskill	Ulster	2,540
Mount Tom	Elizabethtown	Essex	1,620
Mount Tom	Fort Ann	Washington	1,422
Mount Washington	Hammondsport	Steuben	1,889
Mount Zpar	Durham	Greene	2,690
Moxham Mountain	Schroon Lake	Essex Warren	2,461
Mud Lake, water surface	Alexandria Bay	Jefferson	354
Mud Lake, water surface	Baldwinsville	Onondaga	425
Mud Lake, water surface	Big Moose	Herkimer	1,743
Mud Lake, water surface	Indian Lake	Hamilton	1,726
Mud Lake, water surface	Lake Pleasant	Hamilton	1,726
Mud Lake, water surface	Ogdensburg	St. Lawrence	316
Mud Lake, water surface	West Canada Lakes	Hamilton	2,344
Mud Lake Mountain	Loon Lake	Franklin	2,576
Mud Pond, water surface	Ausable	Essex	558
Mud Pond, water surface	Blue Mountain	Hamilton	1,605
Mud Pond, water surface	Blue Mountain	Hamilton	1,834
Mud Pond, water surface	Cambridge	Washington	451
Mud Pond, water surface	Carmel	Putnam	721
Mud Pond, water surface	Ellenville	Ulster	1,845
Mud Pond, water surface	Long Lake	Hamilton	1,712
Mud Pond, water surface	Oswego	Oswego	355
Mud Pond, water surface	Oxford	Chenango	1,579

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Mud Pond, water surface	Raquette Lake	Hamilton	1,733
Mulley Pond, water surface	Schroon Lake	Essex	1,467
Murphy Lake, water surface	Stony Creek	Hamilton	1,484
Murray	Attica	Erie	820
Muscoot Lake, water surface	West Point	Westchester	405
Muscoot Reservoir	Carmel	Westchester	405
Muskalonge Lake, water surface	Hammond	Jefferson	302
Myers Hill triangulation station	Remsen	Oneida	1,765
Myosotis Lake, water surface	Berne	Albany	1,578
Nanticoke Springs	Harford	Broome	1,061
Napanoch Point	Ellenville	Ulster	1,865
Narrow Hill	Waverly	Chemung	1,706
Nate Pond, water surface	Newcomb	Essex	2,010
Nehasane Lake, water surface	Big Moose	Hamilton	1,695
Nellis triangulation station	Canajoharie	Montgomery	588
Nelson	Casenovia	Madison	1,432
Neversink	Neversink	Sullivan	1,317
New Pond, water surface	Raquette Lake	Hamilton	1,841
Newburg Junction	Schunemunk	Orange	519
New Centerville	Pulaski	Oswego	545
Newcomb Lake, water surface	Newcomb	Essex	1,734
Newcomb Lake, water surface	Santanoni	Essex	1,735
Newcomb Pond, water surface	Hoosick	Rensselaer	575
Newfield triangulation station	Ithaca	Tompkins	2,095
New Hampton	Goshen	Orange	436
New Ireland	Binghamton	Broome	1,211
Newport	Goshen	Orange	401
New Prospect Church	Ellenville	Ulster	445
Newton Peak	Lyon Mountain	Clinton	2,883
Newtown	Eden	Erie	849
New Vernon	Ellenville	Sullivan	663
Niagara Falls, crest	Niagara Falls	Niagara	517
Niagara Falls, foot	Niagara Falls	Niagara	357
Nichols Pond, water surface	Elizabethtown	Essex	1,400
Nicks Lake, water surface	Old Forge	Herkimer	1,706
Niggerhead Mountain triangulation station	Raquette Lake	Hamilton	2,801
Nigger Lake, water surface	Big Moose	Herkimer	1,839
Nine Corner Lake, water surface	Lassellsville	Fulton	1,868
Nineveh Junction	Nineveh	Chenango	1,033
Nippletop	Mount Marcy	Essex	4,620
Nippletop	Paradox Lake	Essex	2,941
Nippletop Mountain	Schroon Lake	Essex	2,990
Niverville	Kinderhook	Columbia	328
Noble Mountain	Elizabethtown	Essex	2,900
Noonmark Mountain	Mount Marcy	Essex	3,552
North Bridgewater	Winfield	Oneida	1,247
North Broadalbin	Broadalbin	Fulton	788
North Brookfield	Sangerfield	Madison	1,317
North Cameron	Bath	Steuben	1,550
North Center	Orwell	Jefferson	1,469
North Chemung	Waverly	Chemung	1,019
North Chili	Brockport	Monroe	581
North Constantia	Kasoag	Oswego	553
North Dome	Phoenicia	Greene	3,593
North Fenton	Binghamton	Broome	974
North Hector	Ovid	Schuyler	873
North Kortwright	Hobart	Delaware	1,566
North Lake, water surface	Old Forge	Herkimer	1,827
North Manlius	Chittenango	Madison	404
North Olean	Olean	Cattaraugus	1,435
North Pharsalia	Norwich	Chenango	1,532
North Pond, water surface	Boonville	Oneida	1,303
North Pond, water surface	Kasoag	Oswego	578
North Pond, water surface	Oxford	Chenango	1,689
North Pond, water surface	Raquette Lake	Hamilton	1,860
North Pond, water surface	Schroon Lake	Essex	1,250
North River Mountain	Mount Marcy	Essex	3,890
North Rose	Clyde	Wayne	388
North Scriba	Fulton	Oswego	428
North Sheldon	Attica	Wyoming	1,467
North Syracuse	Syracuse	Onondaga	416
North Urbana	Hammondsport	Steuben	1,366
Northville	Broadalbin	Fulton	796
North Volney	Fulton	Oswego	451

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Notch Mountain	Piseco Lake	Hamilton	2,234
No. 8 Mountain	Paradox Lake	Warren	1,951
No. 9 Mountain	North Creek	Warren	2,128
Oakdale station	Fire Island	Suffolk	17
Oak Hill	Bath	Steuben	2,182
Oak Hill	Boonville	Oneida	1,667
Oak Hill	Elizabethtown	Essex	1,730
Oak Hill	Indian Lake	Hamilton	2,455
Oakland	Nunda	Livingston	1,030
Oak Orchard Swamp	Medina	Genesee	613
Oak Ridge	Hoosick	Washington	777
Oakvale station	Hammond	St. Lawrence	302
Odell Hill	Hoosick	Rensselaer	1,325
Odell Lake, water surface	Hobart	Delaware	2,050
Ogden Center	Brockport	Monroe	590
Ohmer Mountain	Stony Creek	Saratoga	2,602
Old Chatham	Kinderhook	Columbia	539
Old Far Mountain	Elizabethtown	Essex	2,325
Olive	Rosendale	Ulster	649
Oliver Hill	Schroon Lake	Essex	2,477
Oliver Pond, water surface	Schroon Lake	Essex	1,486
Oneida Lake, water surface	Chittenango Oneida	Oneida Oswego	370
Oneida Reservoir	Oneida	Oneida	640
Onion Hill	Indian Lake	Hamilton	2,637
Onondaga Lake, water surface	Syracuse	Onondaga	364
Ontario Lake, water surface	Niagara Falls	Niagara	246
Open Meadows	Chautauqua	Chautauqua	1,514
Oramel	Angelica	Allegany	1,264
Orange Lake, water surface	Newburg	Orange	489
Orange triangulation station	Watkins	Schuyler	2,034
Orangeville	Batavia	Wyoming	1,698
Oriskany	Oriskany	Oneida	423
Oscawana Lake, water surface	West Point	Putnam	545
Osgood Hill	Whitehall	Washington	571
Osgood Pond, water surface	Saranac	Franklin	1,650
Oswegatchie River, water surface under at Heuvelton.	Ogdensburg	St. Lawrence	271
Oswego Falls	Fulton	Oswego	331
Otsico Lake, water surface (lake rising, corrected elevation 1910).	Skaneateles	Onondaga	787
Otsego Lake, water surface	Cooperstown Richfield Springs	Otsego	1,194
Otsego triangulation station	Canajoharie	Otsego	2,301
Otter Lake, water surface	Gloversville	Fulton	1,638
Otter Lake, water surface	McKeever	Herkimer	1,584
Otter Lake, water surface	McKeever	Oneida	1,516
Otter Pond, water surface	Newcomb	Essex	1,630
Ouaquaga	Nineveh	Broome	943
Oven Mountain	North Creek	Warren	2,169
Overlook Mountain	Kaaterskill	Ulster	3,150
Ovid Center	Genoa	Seneca	811
Owasco Lake, water surface	Auburn Skaneateles	Cayuga	710
Owego	Apalachin	Tioga	810
Owl Pate	Paradox Lake	Essex	2,444
Owl Pond, water surface	Indian Lake	Hamilton	1,931
Owls Head	Blue Mountain	Hamilton	2,780
Owls Head	Mount Marcy	Essex	2,165
Owls Head Pinnacle	Loon Lake	Franklin	1,800
Owlshead Pond, water surface	Raquette Lake	Hamilton	1,842
Owls Head triangulation station	Loon Lake	Franklin	2,260
Oxbow Lake, water surface	Lake Pleasant	Hamilton	1,710
Oxbow Mountain	Lake Pleasant	Hamilton	2,307
Page	Highmarket	Lewis	1,933
Page Brook	Greene	Chenango	1,008
Page Mountain	Indian Lake	Hamilton	2,885
Palermo	Fulton	Oswego	462
Palmer Hill	Ausable	Clinton	1,146
Palmertown Mountain	Glens Falls	Saratoga	1,065
Panther Lake, water surface	Kasoag	Oswego	599
Panther Mountain	Indian Lake	Hamilton	3,865

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Panther Mountain	Phoenicia	Ulster	3,760
Panther Mountain	Piseco Lake	Hamilton	2,718
Panther Peak	Santanoni	Essex	4,448
Paradox Lake, water surface	Paradox Lake	Essex	820
Paris	Sangerfield	Oneida	1,481
Parish	Mexico	Oswego	483
Parishville Center	Potsdam	St. Lawrence	659
Park Mountain	Paradox Lake	Warren	1,986
Parker Mountain	Kaaterskill	Greene	3,205
Parkers	Highmarket	Lewis	1,844
Parker triangulation station	Albion	Genesee	744
Park Hill triangulation station	Boonville	Oneida	1,309
Parma	Brockport	Monroe	434
Parma Center	Hamlin	Monroe	340
Partridge Mountain	North Creek	Warren	1,953
Patchogue	Setauket	Suffolk	25
Patterson Ridge	Gilboa	Greene	2,865
Pattersonville	Amsterdam	Schenectady	275
Pavilion	Batavia	Genesee	941
Payne Hill	Port Henry	Essex	844
Payne Mountain	Willisboro	Essex	1,154
Paynes Lake, water surface	Hammond	Jefferson	342
Peach Lake, water surface	Carmel	Putnam Westchester	530
Peaked Hill	Paradox Lake	Essex	1,840
Peaked Hills	Schroon Lake	Essex	2,165 2,286
Peaked Mountain Pond, water surface	Big Moose	Herkimer	1,748
Peaked Mountain triangulation station	Thirteenth Lake	Warren	2,920
Peak Ridge	Elizabethtown	Essex	4,375
Peckham Pond, water surface	Hoosick	Rensselaer	1,490
Peck Lake, water surface	Gloversville	Fulton	1,360
Peekamoose Lodge	Slide Mountain	Ulster	1,415
Peekamoose Mountain	Slide Mountain	Ulster	3,863
Pelcher Pond, water surface	Raquette Lake	Hamilton	1,813
Pelletts Island Mountain	Goshen	Orange	506
Penelope	Greene	Broome	1,320
Penfield	Macedon	Monroe	429
Penfield Center	Macedon	Monroe	512
Peoria	Berne	Albany	936
Peoria	Caledonia	Wyoming	1,145
Perch Lake, water surface	Theresa	Jefferson	317
Perch Pond, water surface	Newcomb	Essex	1,775
Perry Mountain	Stony Creek	Saratoga	2,365
Perryville	Dryden	Tioga	1,020
Persons Corners	Attica	Wyoming	1,360
Perth	Broadalbin	Fulton	870
Peru	Dannemora	Clinton	349
Petersburg Junction	Hoosick	Rensselaer	465
Petersburg Mountain	Schoharie	Schoharie	2,311
Peters Corners	Gloversville	Fulton	1,463
Peters Pond, water surface	Gloversville	Fulton	1,405
Pharoah Mountain	Paradox Lake	Essex	2,557
Pharsalia	Pitcher	Chenango	1,561
Phelps Junction	Phelps	Ontario	570
Phillipsburg	Goshen	Orange	365
Phillips Mills	Chautauqua	Chautauqua	1,314
Phillipsport	Ellenville	Sullivan	506
Pickerel Pond, water surface	Nineveh	Broome	1,025
Pickwacket Pond, water surface	Long Lake	Hamilton	1,791
Piercefield Flow, water surface	Tupper Lake	Franklin St. Lawrence	1,542
Pierrepont	Canton	St. Lawrence	740
Pigeon Hill	Palmyra	Wayne	665
Pigeon Lake, water surface	Big Moose	Hamilton	2,070
Pike Hill	Troy	Rensselaer	1,165
Pilgrim Mountain	Raquette Lake	Hamilton	2,805
Pillsbury Lake, water surface	West Canada Lakes	Hamilton	2,490
Pilot Knob	Glens Falls	Washington	2,180
Pinckney	Carthage	Lewis	1,488
Pine Cobble	Richfield Springs	Otsego	1,772
Pine Hill	Catskill	Columbia	617
Pine Hill	Fort Ann	Washington	1,070
Pine Hill	Indian Lake	Hamilton	2,200
Pine Hill	Newcomb	Essex	2,129

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Pine Hill	Schroon Lake	Essex	2,214
Pine Lake, water surface	Blue Mountain	Hamilton	1,592
Pine Lake, water surface	Piseco Lake	Hamilton	1,839
Pine Lake, water surface	Lassellsville	Fulton	1,561
Pine Lakes, water surface	Indian Lake	Hamilton	1,750 1,755
Pinelawn	Babylon	Suffolk	84
Pine Mountain	Bolton	Warren	1,327
Pine Mountain	Gilboa	Schoharie Delaware	1,860
Pine Mountain	Lassellsville	Fulton	2,200
Pine Mountain	Newcomb	Essex	2,153
Pine Mountain	North Creek	Warren	2,010
Pine Peak	Indian Lake	Hamilton	2,271
Pine Pond, water surface	Carmel	Putnam	603
Pine Pond, East, water surface	Saint Regis	Franklin	1,587
Pine Pond, West, water surface	Saint Regis	Franklin	1,590
Pinnacle	Apalachin	Tioga	1,560
Pinnacle	Copake	Columbia	808
Pinnacle	Fort Ann	Washington	1,571
Pinnacle triangulation station	Gloversville	Fulton	2,514
Piseco Lake, water surface	Piseco Lake	Hamilton	1,661
Piseco Mountain	Piseco Lake	Hamilton	2,748
Pitcher	Pitcher	Chenango	1,142
Pitchoff Mountain	Elizabethtown	Essex	2,750
Pitchoff	Mount Marcy	Essex	3,450
Pittsford	Rochester	Monroe	459
Plateau Mountain	Kaaterskill	Greene	3,855
Plattekill	Newburg	Ulster	565
Plattekill Mountain	Hobart	Delaware	3,250
Plattekill Mountain	Kaaterskill	Greene	3,135
Pleasant Brook	Cooperstown	Otsego	1,334
Pleasant Lake, water surface	Carthage	Jefferson	1,064
Pleasant Lake, water surface	Hammond	St. Lawrence	335
Pleasant Lake, water surface	Lassellsville	Fulton	1,638
Pleasant Lake, water surface	Tupper Lake	St. Lawrence	1,658
Pleasant Valley	Clymer	Chautauqua	1,511
Pleasure Lake	Monticello	Sullivan	1,210
Plessis	Alexandria Bay	Jefferson	406
Plumadore	Loon Lake	Franklin	1,705
Plumadore Pond, water surface	Loon Lake	Franklin	1,705
Plum Island	Gardiners Island	Suffolk	98
Plumley Pond, water surface	Raquette Lake	Hamilton	1,765
Plymouth	Norwich	Chenango	1,254
Podunk Pond, water surface	Glens Falls	Washington	839
Pokamoonshine Mountain tringulation station.	Ausable	Essex	2,162
Poland Center	Jamestown	Chautauqua	1,265
Polaris Mountain	Newcomb	Essex	2,524
Polliwog Pond, water surface	Saint Regis	Franklin	1,595
Pond triangulation station	Medina	Genesee	896
Pontiac	Eden	Erie	718
Poplar Hill	Hoosick	Rensselaer	1,475
Poplar Ridge	Genoa	Cayuga	1,047
Portage	Portage	Wyoming	1,313
Port Dickenson	Binghamton	Broome	884
Porter Mountain	Indian Lake	Hamilton	2,507
Porter Mountain	Mount Marcy	Essex	4,070
Porterville	Depew	Erie	937
Portland	Utica	Herkimer	721
Potash Mountain	Indian Lake	Hamilton	2,660
Potter Hill	Hobart	Schoharie	2,539
Potter Mountain	North Creek	Warren	1,525
Potter Mountain	Paradox Lake	Essex	1,892
Pratt Rocks	Gilboa	Greene	1,834
Prattsville	Gilboa	Greene	1,150
Preston	Norwich	Chenango	1,468
Preston Hill	Clove	Dutchess	1,460
Preston Ponds (lower), water surface	Santanoni	Essex	2,156
Preston Ponds (upper), water surface	Santanoni	Essex	2,158
Princetown triangulation station	Amsterdam	Schenectady	1,434
Prospect Hill	Hobart	Delaware	2,143
Prospect Hill	Richfield Springs	Otsego	2,085
Prospect Hill	Willsboro	Essex	909

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Prospect Hill triangulation station	Newburg	Orange	708
Prospect Hill triangulation station	Oriskany	Oneida	1,389
Prospect Hill triangulation station	Owego	Tioga	1,697
Prospect Mountain	North Creek	Warren	1,546
Prospect Mountain	Schunemunk	Orange	1,158
Pulpit Mountain	Lake Placid	Essex	2,658
Pultneyville	Pultneyville	Wayne	274
Pumpkin Hill	Fort Ann	Washington	987
Purgatory Swamp	Goshen	Orange	366
Pusel triangulation station	Medina	Orleans	737
Putnam Hill	Waverly	Chemung	1,710
Putnam Mountain	Glens Falls	Washington	1,914
Putnam Mountain	Paradox Lake	Essex	2,127
Pyramid Lake, water surface	Paradox Lake	Essex	972
Quackenkill	Cohoes	Rensselaer	1,265
Quaker settlement	Casenovia	Madison	1,282
Quaker Street	Berne	Schenectady	1,025
Quebec Pond, water surface	St. Regis	Franklin	1,592
Queer Lake, water surface	Big Moose	Hamilton	1,956
Quogue station	Riverhead	Suffolk	36
Ragged Lake, water surface	Loon Lake	Franklin	1,733
Ragged Lake Mountain	Loon Lake	Franklin	2,775
Ragged Mountain	Schroon Lake	Essex	3,290
Rainbow Lake, water surface	Saranac	Franklin	1,688
Randallsville	Morrisville	Madison	1,124
Rand Mountain	Stony Creek	Hamilton	1,790
Ransomville	Tonawanda	Niagara	323
Raquette Lake, water surface	Raquette Lake	Hamilton	1,762
Raquette Pond, water surface	Long Lake	Franklin	1,542
Raquette River	Massena	St. Lawrence	196
Raters Corners	Clymer	Chautauqua	1,445
Rattlesnake Cobble	Glens Falls	Warren	1,213
Rattlesnake Mountain	Ausable	Essex	1,328
Rattlesnake Mountain	Willsboro	Essex	1,259
Raven Hill	Elizabethtown	Essex	1,967
Ray	Attica	Genesee	946
Reaman triangulation station	Canajoharie	Montgomery	800
Record Hill	Ticonderoga	Washington	1,292
Rector	Carthage	Lewis	1,806
Redbird	Chautauqua	Chautauqua	1,287
Redhill	Slide Mountain	Ulster	2,710
Red Lake, water surface	Hammond	Jefferson	306
Red Pond, water surface	Hoosick	Rensselaer	1,385
Red Rock	Lake Placid	Essex	2,490
Reservoir, water surface	Olean	Allegany	1,560
Reservoir No. 1, water surface	Port Jervis	Orange	576
Reservoir No. 2, water surface	Port Jervis	Orange	997
Reservoir No. 3, water surface	Port Jervis	Orange	1,019
Rexford Flats	Schenectady	Schenectady	205
Reynolds Corners	Glens Falls	Saratoga	328
Reynolds Hill	Fort Ann	Washington	1,017
Reynolds Hill	Tarrytown	Westchester	565
Rheims	Bath	Steuben	789
Rhoda Ponds, lower	Copake	Columbia	501
Rhoda Ponds, upper	Copake	Columbia	541
Rice Mountain	Cohoes	Rensselaer	925
Richfield	Winfield	Otsego	1,484
Richford triangulation station	Harford	Tioga	1,997
Rich Lake, water surface	Newcomb	Essex	1,564
Richland	Pulaski	Oswego	522
Richmond Corners	Gilboa	Greene	2,075
Richmond Mountain	Gilboa	Schoharie Greene	3,213
Richtmyer Peak	Gilboa	Schoharie	2,967
Rickard triangulation station	Canajoharie	Montgomery	1,029
Ridgebury	Goshen	Orange	585
Ridge Road	Lockport	Niagara	402
Ridgeway	Ridgeway	Orleans	420
Riga	Brockport	Monroe	637
Risby Lakes, water surface, First Lake	Old Forge	Herkimer	2,030
Risby Lakes, water surface, Second Lake			2,030
Risby Lakes, water surface, Third Lake			2,021

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Roakdale	Loon Lake	Franklin	1,702
Robinson Pond, water surface	Copake	Columbia	531
Rock Glen	Portage	Wyoming	1,343
Rock Lake, water surface	Big Moose	Herkimer	1,784
Rock Lake, water surface	Blue Mountain	Hamilton	1,706
Rock Lake, water surface	Lake Pleasant	Hamilton	1,914
Rockland Lake, water surface	Tarrytown	Rockland	160
Rock Pond, water surface	Blue Mountain	Hamilton	1,771
Rock Pond, water surface	Indian Lake	Hamilton	1,869
Rock Pond, water surface	Long Lake	Hamilton	1,715
Rock Pond, water surface	Raquette Lake	Hamilton	1,721
Rockville	Angelica	Allegany	1,431
Rodman	Watertown	Jefferson	726
Rogers	Ausable	Clinton	578
Rogers Pond, water surface	Schroon Lake	Essex	1,284
Rollins Pond, water surface	St. Regis	Franklin	1,575
Rome triangulation station	Oriskany	Oneida	506
Romulus	Geneva	Seneca	719
Ronkonkoma Lake, water surface	Setauket	Suffolk	57
Rooster Comb	Mount Marcy	Essex	2,795
Rooster Hill	Lassellsville	Hamilton	2,240
Rose	Clyde	Wayne	425
Rose Mountain	Phoenicia	Ulster	3,123
Rose Pond, water surface	Big Moose	Hamilton	1,781
Rosendale	Rosendale	Ulster	182
Rossman	Kinderhook	Columbia	92
Rossman Pond, water surface	Richmondville	Schoharie	2,054
Ross Mills	Jamestown	Chautauqua	1,263
Ross triangulation station	Medina	Orleans	701
Round Hills	Durham	Greene	2,529
Round Hill triangulation station	Stamford	Westchester	551
Round Lake, water surface	Broadalbin	Saratoga	1,499
Round Lake, water surface	Schenectady	Schenectady	188
Round Lake, water surface	Tupper Lake	Hamilton	1,718
Round Mountain	Lake Pleasant	Hamilton	2,411
Round Mountain	Mount Marcy	Essex	3,145
Round Mountain	West Canada Lakes	Hamilton	2,829
Round Pond, north, water surface	Greene	Chenango	1,337
Round Pond, south, water surface	Greene	Chenango	955
Round Pond, water surface	Indian Lake	Hamilton	1,852
Round Pond, water surface	Long Lake	Hamilton	1,632
Round Pond, water surface	Paradox Lake	Essex	987
Roundtop	Gilboa	Delaware	3,448
Roundtop Mountain	Kaaterskill	Greene	3,470
Royalton	Lockport	Niagara	644
Ruby Mountain	Thirteenth Lake	Essex	2,638
Ruggs Pond, water surface	Oxford	Chenango	1,406
Rundell triangulation station	Durham	Albany	1,245
Rush	Honeoye	Monroe	542
Rushford	Angelica	Allegany	1,523
Rusk Mountain	Phoenicia	Greene	3,680
Russ Pond, water surface	Mexico	Oswego	425
Russia Mountain	Dannemora	Clinton	140
Russian Lake, water surface	Big Moose	Hamilton	1,848
Ruth	Hobart	Schoharie	1,591
Rutland Center	Watertown	Jefferson	963
Rye Pond, water surface	Stamford	Westchester	301
Ryther Mountain	Stony Creek	Saratoga	1,710
Sable Mountains	Loon Lake	Franklin	2,886
Sacandaga Lake, water surface	Indian Lake Lake Pleasant	Hamilton	1,724
Sacandaga Park	Broadalbin	Fulton	811
Sackett Lake, water surface	Monticello	Sullivan	1,327
Saddleback	Mount Marcy	Essex	4,530
Saddleback Mountain	Ausable	Essex	3,623
Safford Pond, water surface	Big Moose	Herkimer	1,761
Sag Harbor	Sag Harbor	Suffolk	13
St. Dominic Convent	Babylon	Suffolk	43
St. James	Setauket	Suffolk	167
St. John Lake	Stony Creek	Warren	2,220
St. Johnsburg	Tonawanda	Niagara	577
St. Joseph Lake, water surface	Monticello	Sullivan	1,433
St. Lawrence River, water surface	Alexandria Bay Cape Vincent	Jefferson	246

Locality.	Quadrangle.	County.	Elevation.
			Feet.
St. Lawrence River, water surface	Ogdensburg	St. Lawrence	243
St. Marys Lake, water surface	Stamford	Westchester	179
St. Marys Pond, water surface	Mexico	Oswego	544
St. Regis Lake, Lower, water surface	St. Regis	Franklin	1,617
St. Regis Lake, Upper, water surface	St. Regis	Franklin	1,617
St. Regis Mountain	St. Regis	Franklin	2,882
St. Regis Pond, water surface	St. Regis	Franklin	1,616
Sala	Fulton	Oswego	458
Salem	Cambridge	Washington	490
Salisbury	Little Falls	Herkimer	1,214
Salmon Lake, water surface	Big Moose	Herkimer	1,720
Salmon Lake, water surface	Raquette Lake	Hamilton	1,809
Salmon Lake Mountain	Raquette Lake	Hamilton	2,530
Salmon Pond, water surface	Blue Mountain	Hamilton	2,069
Salt Hill	Tarrytown	Westchester	745
Salt Point	Rhinebeck	Dutchess	249
Salt Springville	Canajoharie	Montgomery	986
Sampson Bog, water surface	West Canada Lakes	Hamilton	2,381
Sampson Lake, water surface	West Canada Lakes	Hamilton	2,383
Samson Mountain	Slide Mountain	Ulster	2,763
Sams Point triangulation station	Ellenville	Ulster	2,255
Samuels Point	Slide Mountain	Ulster	2,764
Sanborn	Tonawanda	Niagara	639
Sand Lake, water surface	Lake Pleasant	Hamilton	1,947
Sand Lake, water surface	Old Forge	Herkimer	1,830
Sand Pond, water surface	Schroon Lake	Essex	1,833
Sand Pond Mountain	Schroon Lake	Essex	3,040
Sand Ridge	Depew	Erie	828
Sandford Lake, water surface	Santanoni	Essex	1,720
Santanoni Peak	Santanoni	Essex	4,621
Saranac Lake, Lower, water surface	Saranac	Franklin	1,534
Saranac Lake, Middle, water surface	St. Regis	Franklin	1,536
Saranac Lake, Upper, water surface	St. Regis	Franklin	1,571
Saratoga Lake, water surface	Cohoes	Saratoga	204
Saratoga Lake, water surface	Schenectady	Schenectady	204
Sargent Ponds, Lower, water surface	Raquette Lake	Hamilton	1,796
Sargent Ponds, Upper, water surface	Raquette Lake	Hamilton	1,825
Saunders Mountain	Elizabethtown	Essex	2,003
Sawteeth	Mount Marcy	Essex	4,138
Sawyer	Tonawanda	Niagara	579
Sawyers Hill	Goshen	Orange	1,045
Sayles Corners	Skaneateles	Cayuga	1,589
Sayville	Fire Island	Suffolk	22
Schoolhouse Lake, water surface	Cambridge	Washington	533
Schroon Lake, water surface	North Creek Schroon Lake	Essex, Warren	807
Schultz Mountain	Rhinebeck	Dutchess	780
Schultzville	Rhinebeck	Dutchess	375
Schuyler triangulation station	Utica	Herkimer	1,582
Scioto	Mooers	Clinton	323
Scipioville	Auburn	Cayuga	990
Scotch Bush	Amsterdam	Montgomery	765
Scotchtown	Goshen	Orange	725
Scott	Cortland	Cortland	1,402
Scott	Olean	Cattaraugus	1,470
Scottsburg	Wayland	Livingston	924
Scottsville	Rochester	Monroe	553
Searles Hill	Tarrytown	Westchester	725
Searsburg	Genoa	Schuyler	1,338
Sears Pond, water surface	Highmarket	Lewis	1,734
Searsville	Ellenville	Orange	473
Second Milo	Penn Yan	Steuben	1,059
Second Pond, water surface	Hoosick	Rensselaer	1,484
Second Pond, water surface	Long Lake	Hamilton	1,798
Secor Lake, water surface	West Point	Putnam	565
Seneca Castle	Phelps	Ontario	762
Seneca Lake, water surface	Geneva	Seneca	444
Seneca Lake, water surface	Ovid	Schuyler Seneca	444
Seneca Mountain	Stony Creek	Saratoga	2,459
Sentinel Peak	Lake Placid	Essex	3,858
Sentinel Range	Lake Placid	Essex	3,902
Severance	Paradox Lake	Essex	876
Severance Hill	Schroon Lake	Essex	1,693
Seward Mountain	Santanoni	Franklin	4,404

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Seward Pond, water surface	Long Lake	Franklin	2,050
Seymour Mountain	Saranac	Essex	2,485
Seymour Mountain	Santanoni	Franklin	4,120
Shaker Mountain	Housatonic	Columbia	1,824
Shaker Mountain	Pittsfield	Columbia	1,824
Shallow Lake, water surface	Raquette Lake	Hamilton	1,810
Sharon Center	Canajoharie	Schoharie	1,442
Shaver Pond, water surface	Hoosick	Rensselaer	1,470
Shawangunk Lake, water surface	Goshen-Port Jervis	Orange	761
Shawangunk Mountains	Port Jervis	Orange	1,484
Shaw Corners	Lassellsville	Fulton	1,278
Shedd Lake, water surface	Raquette Lake	Hamilton	1,904
Sheeley Mountain	Lassellsville	Fulton	2,120
Shekomeko	Millbrook	Dutchess	665
Sheldon Corners	Clymer	Chautauqua	1,509
Shelving Rock Mountain	Bolton	Washington	1,135
Sherburne	Norwich	Chenango	1,060
Sheridan	Cherry Creek	Chautauqua	758
Sheridan Mountain	Phoenicia	Ulster	2,207
Sheriff Lake, water surface	Piseco Lake	Hamilton	1,857
Sherman Mountain	Piseco Lake	Hamilton	2,650
Shingle Shanty Pond, water surface	Big Moose	Hamilton	1,904
Shirley	Eden	Erie	1,061
Shoemaker Hill	Waverly	Chemung	1,705
Shortsville	Phelps	Ontario	641
Short Tract	Angelica	Allegany	1,668
Shutter Corners	Schoharie	Schoharie	671
Siamese Mountain	Thirteenth Lake	Warren	2,420
Siamese Ponds, water surface	Thirteenth Lake	Warren	2,117 2,128
Sierks	Attica	Wyoming	1,042
Signal Mountain	Piseco Lake	Hamilton	2,965
Silver Lake, water surface	Big Moose	Herkimer	2,103
Silver Lake, water surface	Lake Placid	Franklin	1,378
Silver Lake, water surface	Lake Pleasant	Hamilton	2,072
Silver Lake, water surface	Lyon Mountain	Clinton	1,393
Silver Lake, water surface	Portage	Wyoming	1,356
Silver Springs	Portage	Wyoming	1,402
Simon Pond, water surface	Long Lake	Franklin	1,542
Simpsonville	Cooperstown	Delaware	1,380
Sister Lake, Lower, water surface	Big Moose	Hamilton	1,927
Sister Lake, Upper, water surface	Big Moose	Hamilton	1,930
Sixberry Lake, water surface	Alexandria Bay	Jefferson	316
Six Town Pond, water surface	Sacketts Harbor	Jefferson	418
Skaneateles Lake, water surface	Skaneateles	Cayuga Onondaga	867
Skeene Mountain triangulation station	Whitehall	Washington	518
Skiff Mountain	Paradox Lake	Essex	1,796
Skinnerville	Massena	St. Lawrence	342
Skytop triangulation station	Rosendale	Ulster	1,542
Slab Bridge	Loon Lake	Franklin	1,307
Sleeping Beauty Mountain	Bolton	Washington	2,349
Slide Mountain	Slide Mountain	Ulster	4,204
Slide Mountain	Thirteenth Lake	Warren	2,890
Slim Pond, water surface	Tupper Lake	Hamilton	1,708
Slip Mountain	Stony Creek	Saratoga	2,590
Smithboro	Owego	Tioga	792
Smith Hill	Utica	Oneida	1,207
Smith Pond, water surface	Bath	Steuben	1,617
Smith Pond, water surface	North Creek	Warren	811
Smiths Mills station	Cherry Creek	Chautauqua	1,009
Smithville station*	Medina	Genesee	766
Snake Den	Pittsfield	Columbia	1,478
Snake Mountain	Goshen	Orange	980
Snowy Mountain triangulation station	Indian Lake	Hamilton	3,903
Sodus Bay, water surface	Clyde	Wayne	246
Solpue Pond, water surface	West Point	Putnam	545
Song Lake, water surface	Tully	Cortland	1,193
Sonora	Hammondsport	Steuben	1,112
Sorrel Hill triangulation station	Baldwinsville	Onondaga	641
Southampton	Sag Harbor	Suffolk	26
South Apalachin	Apalachin	Tioga	964
South Attica	Attica	Wyoming	1,465
South Beacon Hill	West Point	Dutchess	1,635
South Bloomfield	Canandaigua	Ontario	862

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* Now Wheatville station.

Locality.	Quadrangle.	County.	Elevation.
			Feet.
South Canada Lake, water surface	West Canada Lakes	Hamilton	2,344
South Centerville	Port Jervis	Orange	612
South Chili	Brockport	Monroe	590
South Dayton	Cherry Creek	Cattaraugus	1,298
South Gilboa	Hobart	Schoharie	2,007
South Gilboa station	Hobart	Schoharie	1,748
South Greigsville	Caledonia	Livingston	763
South Hill triangulation station	Neversink	Sullivan	1,961
South Lake, water surface	Old Forge	Herkimer	2,014
South Lansing	Genoa	Tompkins	846
South Livonia	Honeoye	Livingston	1,128
South Millbrook	Millbrook	Dutchess	602
South Mountain	Slide Mountain	Ulster	2,180
South Onondaga	Tully	Onondaga	597
South Otselic	Pitcher	Chenango	1,226
South Owego	Apalachin	Tioga	1,544
South Oxford	Oxford	Chenango	958
South Plymouth	Norwich	Chenango	1,145
South Pond, water surface	Blue Mountain	Hamilton	1,766
South Pond, water surface	Carmel	Westchester	465
South Pond, water surface	Mexico	Oswego	565
South Pond Mountain	Thirteenth Lake	Hamilton	3,332
South Rutland	Watertown	Jefferson	1,053
South Sodus	Clyde	Wayne	424
Southwest Oswego	Oswego	Oswego	371
Speculator Mountain	Lake Pleasant	Hamilton	2,973
Spencer	Waverly	Tioga	999
Spencertown	Kinderhook	Columbia	584
Spitfire Lake, water surface	St. Regis	Franklin	1,617
Spitsenberg Hill	West Point	Westchester	545
Split Rock Mountain	Elisabethtown	Essex	1,960
Split Rock Mountain	Port Henry	Essex	1,029
Split Rock Pond, water surface	Newcomb	Essex	1,690
Spotted Mountain	Elisabethtown	Essex	3,480
Spread Eagle Mountain	Mount Marcy	Essex	2,860
Spring Brook	Depew	Erie	800
Spring Brook station	Depew	Erie	748
Spring Lake, water surface	Angelica	Alleghany	1,522
Spring Lakes, water surface	Catskill	Dutchess	258
Sprout Brook	Canajoharie	Montgomery	726
Spruce Lake, water surface	West Canada Lakes	Hamilton	2,377
Spruce Mountain	Bolton	Warren	1,885
Spruce Mountain	Phoenicia	Ulster	3,380
Spruce Mountain	Stony Creek	Saratoga	2,615
Spruce Mountain	Whitehall	Washington	1,911
Spy Lake, water surface	Piseco Lake	Hamilton	1,654
Square Pond, water surface	St. Regis	Franklin	1,572
Squaw Mountain	Indian Lake	Hamilton	3,240
Staatsburg	Rhinebeck	Dutchess	30
Stafford	Batavia	Genesee	900
Stanfordville	Millbrook	Dutchess	327
Star Rock	Kaaterskill	Greene	2,515
State Brook Mountain	Piseco Lake	Hamilton	2,535
Steenburg Mountain	Gilboa	Schoharie	2,541
Stephens Pond, water surface	Blue Mountain	Hamilton	1,958
Stevens Mountain	Gilboa	Schoharie	1,885
Stevens Mountain	Paradox Lake	Warren	2,153
Stewart Landing	Lassellsville	Fulton	1,541
Stickney Bridge	Ausable	Essex	585
Stid Hill	Naples	Ontario	2,070
Stink Lakes, water surface	Lassellsville	Hamilton Fulton	1,652
Stirling triangulation station	Canajoharie	Montgomery	1,238
Stissing	Millbrook	Dutchess	435
Stittville	Oriskany	Oneida	560
Stockbridge Mountain	Schunemunk	Orange	1,418
Stockham Hill	Cazenovia	Onondaga	1,650
Stockholm	Massena	St. Lawrence	363
Stockholm Center	Massena	St. Lawrence	367
Stockport	Kinderhook	Columbia	47
Stockwell	Sangerfield	Oneida	1,266
Stokes	Boonville	Oneida	634
Stone Church	Brockport	Genesee	681
Stone Ridge	Rosendale	Ulster	368
Stony Creek Ponds, water surface	Long Lake	Franklin	1,545

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Stoppel Point	Kaaterskill	Greene	3,425
Storm King	West Point	Orange	1,340
Stottville	Kinderhook	Columbia	126
Stow	Chautauqua	Chautauqua	1,321
Stratford	Lassellsville	Fulton	1,074
Stratton	Ithaca	Tompkins	659
Street Mountain	Santanoni	Essex	4,216
Sturge Hills	Indian Lake	Hamilton	2,680 2,520
Sugarbush Mountain	Piseco Lake	Hamilton	2,208
Sugarloaf	Glens Falls	Washington	1,018
Sugarloaf Hill	West Point	Putnam	765
Sugarloaf Mountain	Goshen	Orange	1,140
Sugarloaf Mountain	Kaaterskill	Greene	3,782
Sugarloaf Mountain	Loon Lake	Franklin	2,327
Sugarloaf Mountain	Whitehall	Washington	1,945
Sugarloaf Mountain	Willsboro	Essex	1,439
Summerdale	Clymer	Chautauqua	1,639
Summit Lake, water surface	Cambridge	Washington	745
Summit Lake, water surface	Richmondville	Schoharie	2,068
Summit Lake, water surface	Schunemunk	Orange	1,050
Summit Pond, water surface	Big Moose	Herkimer	2,066
Summitville	Ellenville	Sullivan	546
Sumner Lake, water surface	West Canada Lakes	Hamilton	2,105
Sunderland Pond, water surface	Glens Falls	Washington	436
Sunnyside	Kinderhook	Columbia	225
Sutton Pond, water surface	Raquette Lake	Hamilton	1,792
Swart Mountain	Lake Pleasant	Hamilton	3,043
Sylvan Lake	Clove	Dutchess	325
Taberg	Taberg	Oneida	560
Table Mountain	Slide Mountain	Ulster	3,856
Table Top Mountain	Mount Marcy	Essex	4,440
Taghkanick	Copake	Columbia	549
Talcottville	Port Leyden	Lewis	1,141
Tanners	Copake	Columbia	685
Tassell Hill triangulation station	Sangerfield	Oneida	1,944
Taylor	Pitcher	Cortland	1,092
Taylor Pond, water surface	Lake Placid	Franklin	1,371
Teed Corners	Caledonia	Livingston	717
Tefft Pond, water surface	Lyon Mountain	Clinton	1,361
Tenant Lake, water surface	Stony Creek	Saratoga	1,663
Tenant Mountain	Stony Creek	Saratoga	2,761
Terre Hill	Syracuse	Onondaga	495
Terror Lake, water surface	Big Moose	Hamilton	2,032
Terry Mountain	Dannemora	Clinton	2,081
Terryville	Setauket	Suffolk	152
Texas	Fulton	Oswego	273
Texas Ridge	Schroon Lake	Essex	3,212
Thayer Lake, water surface	Big Moose	Hamilton	1,780
The Knob	Pittsfield	Columbia	1,602
Third Brother	Paradox Lake	Warren	1,956
Third Pond, water surface	Long Lake	Hamilton	1,869
Thirsty Pond, water surface	Big Moose	Herkimer	2,123
Thirteenth Lake, water surface	Thirteenth Lake	Warren	1,674
Thomas Cole Mountain	Durham	Greene	3,935
Thompson Corner	Canandaigua	Ontario	796
Thompson Corners	Kasoag	Oneida	514
Thompson Ridge	Ellenville	Orange	459
Thompsons Lake, water surface	Berne	Albany	1,283
Thorn Hill	Whitehall	Washington	1,173
Three Brothers	Ticonderoga	Essex	990 1,142 1,403
Thumb Pond, water surface	Newcomb	Essex	1,677
Thunderbolt Mountain	Paradox Lake	Essex	1,854
Thunder Hill	Neversink	Sullivan	2,242
Thurman	Luzerne	Warren	617
Thurman Pond, water surface	Schroon Lake	Essex	891
Ticetonyk Mountain	Kaaterskill	Ulster	2,527
Timmerman Hill	Catskill	Greene	598
Tioga Center	Owego	Tioga	792
Tiona	Apalachin	Broome	1,159
Tirrell Pond, water surface	Blue Mountain	Hamilton	1,916
Titicus Reservoir	Carmel	Westchester	328

Locality.	Quadrangle.	County.	Elevation.
			Feet
Titusville	Loon Lake	Franklin	1,281
T Lake water surface	Piseco Lake	Hamilton	2,464
T Lake Mountain	Piseco Lake	Hamilton	3,052
Toddsville	Cooperstown	Otsego	1,236
Tolman Mountain	Lyon Mountain	Clinton	2,373
Tomany Mountain triangulation station	Piseco Lake	Hamilton	2,593
Tompkins Hill triangulation station	West Point	Putnam	1,145
Tongue Mountain	Blue Mountain	Hamilton	3,165
Tongue Mountain	Bolton	Warren	1,822
Tontshi Mountain	Kaaterskill	Ulster	1,310
Tower Mountain	Gilboa	Greene	2,980
Towerville Corners	Chautauqua	Chautauqua	1,303
Town Line	Depew	Erie	750
Town Line station	Depew	Erie	730
Townsend triangulation station	Salamanca	Cattaraugus	2,375
Townsendville	Ovid	Seneca	1,426
Tracy Creek	Apalachin	Broome	1,187
Traver Hill	Rhinebeck	Dutchess	693
Treadway Mountain	Paradox Lake	Essex	2,248
Triangle	Greene	Broome	1,055
Trinity Lake, water surface	Stamford	Westchester	463
Tripod Mountain	Elisabethtown	Essex	3,340
Tripp Pond, water surface	North Creek	Warren	958
Tripp Mountain	North Creek	Warren	1,636
Tristate	Port Jervis	Orange	548
Trout Lake, water surface	Bolton	Warren	791
Trout Lake, water surface	Piseco Lake	Hamilton	1,649
Trout Lake, water surface	Piseco Lake	Hamilton	2,136
Trout Lake Mountain	Piseco Lake	Hamilton	2,245
Trout Pond, water surface	Big Moose	Herkimer	1,666
Trout Pond, water surface	Newcomb	Essex	1,809
Trout Pond, water surface	Tupper Lake	St. Lawrence	1,776
Trumbull Mountain	Paradox Lake	Warren	1,913
Tully Center	Tully	Onondaga	1,250
Tupper Lake, water surface	Long Lake	Franklin	1,542
Tupper Lake, water surface	Tupper Lake	Franklin St. Lawrence	1,542
Turkey Hill	Catskill	Dutchess	783
Turk Hill	Macedon	Monroe	866
Turnwood	Margaretville	Ulster	1,921
Tuscarora	Nunda	Livingston	751
Twin Mountain	Kaaterskill	Greene	3,647
Twin Ponds, north	Catskill	Columbia	265
Twin Ponds, south	Catskill	Columbia	250
Twitchell Lake, water surface	Big Moose	Herkimer	2,050
Two Tops	Cambridge	Washington	1,742
Tyner	Oxford	Chenango	1,229
Typnahda Mountain	Olean	Cattaraugus	2,189
Ulster Heights	Slide Mountain	Ulster	1,021
Ulster Park	Rhinebeck	Ulster	149
Ulsterville	Ellenville	Ulster	420
Unadilla Forks	Winfield	Otsego	1,190
Union	Apalachian	Broome	834
Union Corners	Caledonia	Genesee	1,067
Union Hill	Macedon	Monroe Wayne	425
Unionville	Bath	Steuben	1,584
Upper Ausable Lake, water surface	Mount Marcy	Essex	1,993
Upper Chateaugay Lake, water surface	Lyon Mountain	Clinton	1,312
Upper Pond, water surface	Long Lake	Hamilton	1,837
Upper Red Hook	Catskill	Dutchess	238
Upper Saranac Lake, water surface	Long Lake	Franklin	1,571
Upton Pond, water surface	Rhinebeck	Dutchess	285
Utowana Lake, water surface	Blue Mountain Raquette Lake	Hamilton	1,789
Utsayantha Mountain triangulation station	Hobart	Delaware	3,213
Vailsgate Junction	Schunemunk	Orange	281
Valatie triangulation station	Kinderhook	Columbia	243
Van Atten	Amsterdam	Schenectady	1,008
Vanburen	Baldwinsville	Onondaga	500
Vanburenville	Goshen	Orange	683
Vandenburg Pond, water surface	Gloversville	Fulton	1,385
Vanderberg Mountain	Whitehall	Washington	1,871

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Vandercamp Pond, water surface	Kasoag	Oswego	472
Vanderwhacker Mountain	Newcomb	Essex	3,385
Vandeusenville	Canajoharie	Montgomery	735
Van Dorrien	Santanoni	Franklin	3,025
Vanhornesville	Richfield Springs	Otsego	1,145
Van Keuren	Ellenville	Orange	382
Van Luven Lake, water surface	Catskill	Greene	208
Van Wyck Mountain	Slide Mountain	Ulster	3,260
Varick	Geneva	Seneca	542
Varna	Dryden	Tompkins	996
Vedder Hill	Catskill	Greene	615
Vega	Hobart	Delaware	1,820
Venice	Genoa	Cayuga	1,295
Venison Mountain	Newcomb	Essex	2,316
Vernal	Batavia	Wyoming	1,552
Vernon	Oneida	Oneida	598
Vernon Center	Oneida	Oneida	815
Verona station	Oneida	Oneida	470
Vestal	Apalachin	Broome	828
Vincent	Canandaigua	Ontario	902
Vinegar Hill	Phoenicia	Greene	2,069
Vintonton	Schoharie	Schoharie	1,433
Virgil triangulation station	Harford	Cortland	2,133
Vly Mountain triangulation station	Phoenicia	Greene	3,476
Volney	Fulton	Oswego	443
Vulgary Triangulation station	Albion	Genesee	763
Waccabuc Lake, water surface	Carmel	Westchester	465
Waddington	Waddington	St. Lawrence	273
Wainwright Mountain	Lake Placid	Essex	1,633
Wait Corners	Clymer	Chautauqua	1,722
Waite Settlement	Apalachin	Tioga	1,415
Wakely Mountain	West Canada Lakes	Hamilton	3,617
Wakely Pond, water surface	Indian Lake	Hamilton	2,075
Walker	Fulton	Oswego	264
Walker Valley	Ellenville	Ulster	587
Wallace Mountain	Lake Pleasant	Hamilton	2,724
Wallington, crossing of New York Central & Hudson River R. R. and Northern Central R. R.	Palmyra	Wayne	405
Walworth station	Macedon	Wayne	449
Wampus Lake, water surface	Stamford	Westchester	458
Wardenclyffe	Moriches	Suffolk	137
Warm Pond, water surface	Willsboro	Essex	566
Warner Lake, water surface	Berne	Albany	1,190
Warn Lake, water surface	Oxford	Chenango	933
Wart triangulation station	Hartwick	Otsego	1,927
Washburn Mountain	Copake	Columbia	1,548
Washburn Ridge	Schroon Lake	Essex	2,938
Washington Mills	Oriskany	Oneida	612
Wassaic	Millbrook	Dutchess	458
Waterbarrel Mountain	Blue Mountain	Hamilton	2,730
Waterstreet triangulation station	Amsterdam	Schenectady	1,279
Watertown Center	Watertown	Jefferson	595
Water Valley	Eden	Erie	791
Watsonville	Schoharie	Schoharie	695
Watts Flats	Chautauqua	Chautauqua	1,453
Wawarsing	Slide Mountain	Ulster	286
Wayland	Wayland	Steuben	1,372
Wayne	Hammondsport	Schuyler	1,162
Wayne Four Corners	Hammondsport	Steuben	1,532
Wayneport	Macedon	Wayne	464
Weathersfield Springs	Portage	Wyoming	1,715
Webster Corners	Depew	Erie	808
Weller Pond, water surface	St. Regis	Franklin	1,536
Wellington Mountain	Richfield Springs	Otsego	1,900
Wende	Depew	Erie	791
West Alden	Depew	Erie	845
West Alden station	Depew	Erie	848
West Allen	Angelica	Allegany	1,689
West Bainbridge	Oxford	Chenango	1,281
West Batavia	Attica	Genesee	892
West Bloomfield	Honeoye	Ontario	951
West Boquet Mountain	Willsboro	Essex	1,234
West Branch	Boonville	Oneida	1,005

Locality.	Quadrangle.	County.	Elevation. *Feet.*
West Branch Reservoir, water surface	Carmel	Putnam	502
West Butler	Clyde	Wayne	450
West Canada Lake, water surface	West Canada Lakes	Hamilton	2,367
West Canada Mountain triangulation sta.	West Canada Lakes	Hamilton	2,985
West Caroga Lake, water surface	Gloversville Lassellsville	Fulton	1,450
West Chazy	Mooers	Clinton	265
West Conesville	Gilboa	Schoharie	1,260
West Copake	Copake	Columbia	555
West Creek Mountain triangulation stations	Piseco Lake	Hamilton	2,450 2,480
West Day	Stony Creek	Saratoga	758
West Edmeston	Sangerfield	Madison	1,178
West Ellery	Chautauqua	Chautauqua	1,601
Westernville	Boonville	Oneida	577
West Farmington	Canandaigua	Ontario	648
West Fayette	Geneva	Seneca	540
West Kill Mountain	Phoenicia	Greene	3,777 3,925
West Kilns	Lake Placid	Franklin	1,678
West Lake, water surface	Big Moose	Herkimer	1,719
West Lake, water surface	Lassellsville	Fulton	1,542
West Laurens	Hartwick	Otsego	1,482
West Lowville	Carthage	Lewis	1,220
West Martinsburg	Carthage	Lewis	1,259
Westmoreland	Oriskany	Oneida	528
West Mountain triangulation station	Luserne	Saratoga	2,665
West Mountain triangulation station	Raquette Lake	Hamilton	2,919
West Newark	Apalachin	Tioga	980
Weston	Hammondsport	Schuyler	1,199
West Perrysburg	Cherry Creek	Cattaraugus	1,153
West Perth	Gloversville	Fulton	850
West Pond, water surface	Raquette Lake	Hamilton	1,904
West Potsdam	Canton	St. Lawrence	384
West Richmondville	Richmondville	Schoharie	1,378
West Rooster Hill	Lassellsville	Fulton	2,240
West Rush	Honeoye	Monroe	571
West Shelby	Medina	Orleans	673
West Shokan	Slide Mountain	Ulster	560
West Stockholm	Potsdam	St. Lawrence	385
Westview	Nunda	Livingston	1,663
Westville	Cooperstown	Otsego	1,220
West Walworth	Macedon	Wayne	539
West Windsor	Binghamton	Broome	1,334
Wetmore	Highmarket	Lewis	1,991
Weverton	North Creek	Warren	1,074
Whaley Pond, water surface	Cove	Dutchess	690
Wheeler Mountain	Stony Creek	Warren	2,570
Wheeler Mountain triangulation station	Tupper Lake	St. Lawrence	2,183
Wheeler station	Canandaigua	Ontario	844
Wheelerville	Gloversville	Fulton	1,585
Whey Pond, water surface	St. Regis	Franklin	1,577
Whipple Mountain	Willsboro	Essex	974
Whitaker Lake, water surface	Indian Lake	Hamilton	1,763
Whiteface Mountain	Lake Placid	Essex	4,872
Whitehouse	Lake Pleasant	Hamilton	1,306
Whitelaw	Chittenango	Madison	425
White Lily Pond, water surface	Hoosick	Rensselaer	1,559
White Plains	Tarrytown	Westchester	201
White Pond, water surface	Clove	Putnam	826
White Rock	Hoosick	Rensselaer	2,628
White Rocks	Berlin	Rensselaer	2,242
Whitesboro	Oriskany	Oneida	415
Whites Corners	Eden	Erie	1,200
Whites Hill	Sheffield	Columbia	1,713
Whites Hill triangulation station, north brow.	Potsdam	St. Lawrence	1,427
Whites Hill triangulation station, south brow.	Potsdam	St. Lawrence	1,436
Whitney Lake, water surface	West Canada Lakes	Hamilton	2,452
Wickham Lake, water surface	Goshen	Orange	521
Wilber Lake, water surface	Hartwick	Otsego	1,520
Wilcox Lake, water surface	Stony Creek	Warren	1,444
Wildcat Mountain	Slide Mountain	Ulster	3,268
Wilhelm	Depew	Erie	731

Locality.	Quadrangle.	County.	Elevation.
			Feet.
Willard Mountain	Schuylerville	Washington	1,373
Willet triangulation station	Canajoharie	Montgomery	894
Williamson station	Palmyra	Wayne	417
Willis Lake, water surface	Stony Creek	Hamilton	1,303
Willis Mountain	Indian Lake	Hamilton	2,440
Willow Creek	Genoa	Seneca	746
Willow Glen	Dryden	Tompkins	1,058
Willow Point	Binghamton	Broome	847
Willseyville	Dryden	Tioga	940
Wilmington	Lake Placid	Essex	1,019
Wilmurt Lake, water surface	Piseco Lake	Hamilton	2,466
Wilson Creek	Harford	Tioga	1,106
Wilton	Schuylerville	Saratoga	348
Windecker	Carthage	Lewis	1,673
Windfall Pond, water surface	St. Regis	Franklin	1,639
Windham High Peak	Durham	Greene	3,505
Winterton	Ellenville	Sullivan	599
Wiscoy	Portage	Allegany	1,224
Witchhopple Lake, water surface	Big Moose	Herkimer	1,743
Wittenberg Mountain	Phoenicia	Ulster	3,802
W Mountain	Loon Lake	Franklin	2,734
Wolcottsburg	Lockport	Erie	586
Wolf Jaws	Mount Marcy	Essex	4,225
Wolf Hill	Albany	Albany	1,684
Wolf Pond, water surface	Blue Mountain	Hamilton	2,362
Wolf Pond, water surface	Loon Lake	Franklin	1,514
Wolf Pond, water surface	Loon Lake	Franklin	1,512
Wolf Pond, water surface	St. Regis	Franklin	1,563
Wolf Pond, water surface	Schroon Lake	Essex	1,832
Wolf Pond Mountain	Schroon Lake	Essex	3,473
Wolf Reservoir, water surface	Monticello	Sullivan	1,497
Woodbridge Corners	Ogdensburg	St. Lawrence	353
Wood Falls	Mooers	Clinton	480
Woodhull Lake, water surface	McKeever Old Forge	Herkimer	1,880
Woodman Pond, water surface	Morrisville	Madison	1,123
Woods Corners	Norwich	Chenango	1,013
Woods Lake, water surface	Big Moose	Herkimer	1,984
Woods Lake, water surface	Lake Pleasant	Hamilton	1,375
Woods Lake, water surface	Monticello	Sullivan	1,073
Woodville	Sacketts Harbor	Jefferson	315
Worcester	Richmondville	Otsego	1,413
Worden Hill triangulation station	Naples	Ontario	2,140
Worth	Watertown	Jefferson	1,239
Wurtenburg	Rhinebeck	Dutchess	389
Wyman Hill	Schroon Lake	Essex	2,272
Yankee Reservoir, water surface	Monticello	Sullivan	1,434
Yates	Ridgeway	Orleans	325
Yellow Lake, water surface	Hammond	St. Lawrence	342
York Center	Caledonia	Livingston	623
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